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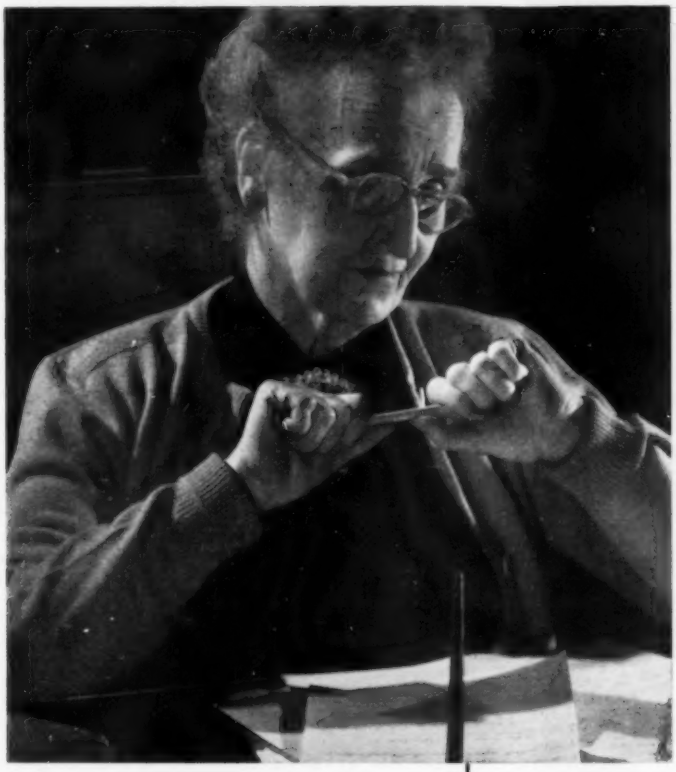

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1. Council on Pharmacy & Chemistry: New and Nonofficial Remedies 1953, Philadelphia, J. B. Lippincott Co., 1953, p. 252.

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THE KERATOME SCISSORS INCISION IN CATARACT EXTRACTION*

THE ADVANTAGES AND DISADVANTAGES

J. K. DE KOCK, D.O.M.S. (R.C.P. & S. Eng.)
Cape Town

The history of cataract surgery makes fascinating reading (Kirby [1]).

Three thousand years ago the Hindus practised the operation of couching using bronze instruments. The earliest record of the operation has been found in a treatise by a great surgeon of ancient India named Susruta. He practised aseptic surgery. He advised that the operating room be fumigated with sweet vapours. His hair and beard were kept short. He cleaned his hands and finger-nails and wore a sweet-smelling dress. Apparently he also used some inhalation anaesthesia.

In 1740 the French surgeon Daviel made the first attempt to deliver a cataract through an incision at the limbus, using the lower half of the eye. The reason why he chose this site was that because patients rolled their eyes upwards this area was the most accessible. This was in pre-anaesthesia days. Daviel used a triangular-shaped blade known as a 'myrtiform', resembling our present-day keratome, and enlarged his incision with a blunt pointed knife and scissors: thus introducing the incision about which I wish to speak—the keratome-scissors incision.

It was in 1867 that von Graefe introduced the modified linear extraction.

GENERAL REMARKS

The execution of a perfect cataract incision gives a sense of satisfaction to even the most experienced operator. It is not, however, always achieved. The degree of success is influenced by 3 factors: (1) the surgeon and his technique; (2) the type of eye to be dealt with; (3) the patient's general condition and nervous temperament.

* A paper presented at the South African Medical Congress, Port Elizabeth, June 1954.

The Surgeon. Stallard [2] states that the qualities of a good surgeon are that he should be constantly calm, imperturbable and patient. There should be a high standard of discipline in the theatre.

Kirby [1] makes the following remarks: 'It is desirable that a cataract surgeon should operate without tension, fear and untoward emotions. He should know himself and his capabilities. He should know his patient and impart confidence to him. It is impossible to guarantee the behaviour of any patient. The surgeon should not put himself at the mercy of the patient. He should be in control. The great secret of the successful surgeon is relaxation.

'What does the surgeon fear? He shares the fear of the patient of permanent loss of vision and blindness. The surgeon does not want to disappoint the patient nor the person who referred the case to him. There is no need for the surgeon at the time of the operation to be apprehensive, perturbed, agitated, to hold his breath, to be rigid or suffer from intention tremor'.

This I agree is the ideal state; but it is not always attained, as all who have operated will testify.

The Patient. The nervous and apprehensive patient does not make things easier for the operator. Proper sedation and adequate local anaesthesia are necessary. Reassurance that all is well and that he is doing the right thing will help. Some patients are over-anxious to help, e.g., when they are asked to look down they will keep their necks rigid, force their chins down on to their chests, and lift their heads off the pillow. Patients are frequently met with who hold their breath for long spells. There is the fat patient who finds it difficult to lie still on the table. Others again complain about the face towels and find it difficult to breathe easily. These are all factors influencing the course of the operation and that important initial step, the incision.

The Type of Eye. We all know the various conditions

we meet with here. We know the ideal operating eye, where one deals with a wide palpebral fissure, a nice big eye with a deep anterior chamber, a clear cornea, and a healthy iris with a pupil that dilates well. Too often one has to deal with the reverse, viz., a narrow palpebral fissure, deep-set eye, small cornea, shallow anterior chamber, atrophic iris, small rigid pupil. Often the patient suffers from diabetes or hypertension. All these conditions make the incision and the whole course of the operation more difficult.

OPINIONS ON THE KERATOME INCISION

(1) *Kirby*[1] says that a good section has long been regarded as the most important part of the operation. It must be well placed, non-traumatizing and sufficiently large. He prefers the Graefe for making his incision, but says: 'The using of the keratome for the primary incision followed by enlargement with scissors has been proved to be entirely satisfactory. The section is good and heals well'.

(2) *Arruga*,[2] who uses the Graefe chiefly, writes: 'The keratome is handier than the knife. The section is made more easily. It is more difficult to injure the iris in cases with shallow anterior chambers'.

(3) *Stallard*[3] remarks: 'When the section is completed with one sweep of the knife, the wound is even. Such is not always possible. A few to-and-fro movements of the blade are necessary to complete the section. It is these manoeuvres which produce irregularities and raggedness of the incision. A more even cut is made with a broad keratome'.

(4) *Castrovejo* of New York, who regularly uses the keratome writes: 'A poor incision will interfere with the smooth performance of the operation, but will also increase the danger of operative complications. The performance of the ideal incision should not be the exclusive privilege of a few gifted surgeons. The average surgeon must be able, routinely, to perform an incision with all the characteristics of the ideal. The keratome-scissors incision is composed of a series of easy manoeuvres which can be performed accurately, and without hurry, by the average surgeon, upon any type of eye. If with the Graefe, surgeons with great dexterity cannot always obtain a good incision, what hope is left for the less skilful surgeons to master the handling of the knife.

'The matter of speed should no longer be an important feature, because the surgeon has complete control over the position of the eye and can afford to prolong the operation, particularly where it will result in the performance of a more accurate section'.

From the opinions expressed by these four eminent eye surgeons it is evident that a case exists for the keratome-scissors incision.

THE OPERATION

I base the following remarks and observations on a series of 400 cataract operations which I have performed during the period 1946-54, using the keratome-scissors incision.

I first became interested in this incision in 1945 after reading an article by O'Brien,[4] of Minnesota, U.S.A., and determined to give it a trial. One of the factors that influenced me to adopt this method was the difficulty experienced, on occasions, in fixing the eye, and preventing it from rolling inwards when making the counter-puncture with the Graefe. One has only to look at the instrument catalogue and observe the different types of fixation forceps designed for this purpose to conclude that the ideal forceps does not exist. Then, too, the grip is influenced by the type of conjunctiva and the presence or absence of subconjunctival or episcleral tissue.

As an average surgeon, not gifted with great dexterity, I wanted at all times and in all my cataract cases to obtain a satisfactory and constant incision. From the onset I was satisfied that in my own particular case a much better control over the eye could be obtained by using the keratome, and making the incision from above downwards and not from below upwards. Since 1946 I have adopted the keratome-scissors incision as a routine in all my cases.

The Keratome. Like the Graefe, this instrument must be very sharp, with a good point. The ideal instrument is the broad Grieshaber keratome with sharp and slightly bevelled edges. This has a knife-like edge and cuts like a cataract knife. It is a beautiful instrument and retains its keenness much better than any other make.

The Scissors. The best scissors for enlarging the incision is the spring-action Westcott's tenotomy scissors. The points are not broad and are blunt. The spring action makes the handling much easier and affords a better control. I have used the Aeblies scissors, designed separately for left and right cutting, and also tried the Sinclair's corneal scissors, but did not find them satisfactory.

The Conjunctival Flap. After the usual routine preliminaries of anaesthesia and akinesia, a few minimums of local anaesthesia are injected subconjunctivally round the upper quadrant of the limbus. The raising of the small bleb facilities the cutting of the flap. The scleral conjunctiva is incised at 12 o'clock about 3-4 mm. from the limbus and the cut is extended parallel to the limbus in both directions to 3 and 9 o'clock. This ensures that the whole incision will be covered at the end of the operation by the conjunctival flap. The conjunctiva is stroked back over the cornea. The next step is to clear the limbus of conjunctiva. With a few strokes by a corneal splitter this is readily done. The limbus is a variable quantity. In some cases the conjunctiva is thick and firmly bound down, while in others, especially the elderly, it is only loosely attached to the cornea itself. It is well worth while spending a little extra time in cleaning the limbus, because it ensures that the incision will be placed in clear limbal tissue and not in the sclera.

All bleeding points are touched with the hand cautery. This enables the incision to be made in a bloodless field, with none of the annoying bleeding into the anterior chamber which often complicates the Graefe incision.

Three 'anacap' conjunctival scleral stitches are now inserted, one at 12 o'clock, one between 11 and 10 o'clock and one between 1 and 2 o'clock. The needle

picks up the scleral tissue about 2 mm. from the limbus. The needles and thread are turned back and up to lie on the towel covering the brow and will be used again after the incision has been completed.

Fixation. For the keratome I prefer a fixation spot above in the 2 o'clock meridian, about 4 mm. from the limbus, where a good grip on the exposed episcleral tissue is usually obtained. A slight upward and forward lift is exerted when the keratome is introduced, and with this method of fixation there is very little danger of pressure on the globe. The Elschnig forceps is the best for this purpose.

INTRODUCING THE KERATOME

The conjunctival flap is stroked back over the cornea, or the flap, if so desired, may be lifted by the assistant. The point of the angled Grieshaber keratome is engaged in the exposed limbal tissue at 11 o'clock and pushed through until practically the whole width of the keratome is engaged in the wound.

To avoid injury to the lens capsule attention is given to the point of the keratome as it passes through the anterior chamber, that it is not angled too far backwards. Such injury is of no consequence in an extracapsular extraction, but annoying when an intracapsular extraction is intended. However, it very rarely happens.

The blade is next swept over along the line of the limbus in a clockwise direction to 2 o'clock. While carrying out this manoeuvre the blade comes into the vertical position, and usually the point is in the direction of 7 o'clock when leaving the eye. The incision can further be extended by a few gentle up and down sawing movements. Therefore it is essential to have a sharp broad keratome of the Grieshaber type, which simplifies the cutting movement.

By using the keratome in the way described, I find that an incision is obtained from between 9 and 10 o'clock to 2 o'clock.

With the Westcott corneal scissors, the keratome incision is enlarged to the desired size. With a little care, there is very little danger of injuring the iris. One blade of the scissors is introduced into the anterior chamber and small snips are cut. It is not necessary to lift the corneal flap with forceps when executing the cutting, but if desired the flap may easily be raised by gripping the conjunctiva close to the limbus when introducing the scissors.

Should the operator fear injuring the iris, the blade of the scissors already in the eye is used as a repositor to flatten out the iris before making a cut. Usually only a few cuts in the 2-3 o'clock area are necessary, if the keratome is introduced as described above.

Before proceeding with the delivery of the lens, I stroke the conjunctival flap back into its position, pick up the conjunctiva near the limbus, and complete the two 'anacap' stitches (referred to above) at 11 and 1 o'clock, leaving the central one for the last, after the lens has been delivered. Such a good firm closure is obtained with this method that I do not consider the corneal stitch necessary. The stitches are left loosely tied and looped over the cornea and tightened after the lens has been delivered. This method has proved to be of great value if prolapse of vitreous takes place.

DIFFICULTIES AND COMPLICATIONS OF THE GRAEFE INCISION

1. Knife introduced upside down (rare).
2. Difficulty with fixation of eye.
3. Globe rolling away when puncture or counter-puncture is made.
4. Knife piercing iris at puncture or counter-puncture.
5. Picking up iris on point of knife.
6. Counter-puncture made too far back in sclera, causing injury to ciliary body.
7. Iris falling on blade of knife.
8. Escape of aqeuous before completion of section.
9. Incision too small.
10. Corneal section.
11. Incision falling in vascular portions of conjunctiva and sclera, causing considerable haemorrhage into the anterior chamber.
12. Pressure exerted by the fixation forceps.
13. Changing over from right to left hand when operating on right and left eyes (unless operator standing in front of patient cuts up when operating on the left eye).

DISADVANTAGES OF THE KERATOME INCISION

(1) *The operation takes longer to perform.* Last week I made a special effort to check the time and found I performed an intra-capsular extraction by the method described above in 23 minutes. Even should the operation take 10 or 15 minutes longer, what does it really matter when a satisfactory result is obtained?

(2) *The keratome point enters the anterior chamber 'blindly'* for the first 2 mm. or so, that is to say, the operator is unable to see the point of the keratome entering the anterior chamber on account of the conjunctival flap turned back over the cornea. Should the incision be placed too far back, the point of the keratome will engage iris tissue. Where this occurs, withdrawing the keratome slightly will disengage the point and the incision can be continued with. This is the reason why the limbus is cleaned with the corneal splitter to permit the point of the keratome to engage in limbal tissue.

(3) *Enlarging the incision with scissors.* This is an additional manoeuvre, usually not necessary when using the Graefe, which introduces an extra instrument into the anterior chamber. Carrying out this step is not difficult and does not occupy too much time, but the scissors must be sharp. Where the keratome has been properly used, only a few snips with the scissors will be required.

'With a sharp scissors the cuts are as clean as those made with a knife. The apposition of the lips of the incision is excellent and healing time can be favourably compared with the cicatrization of knife wounds'. (Castrovejo.)

(4) The conjunctiva remains congested a little longer.

ADVANTAGES OF THE KERATOME INCISION

A bad incision is never made.

1. The surgeon always uses the same hand for making the incision—the right hand, which is the more dextrous and more easily controlled.
2. The surgeon is more relaxed.
3. The patient is less apprehensive. The time spent in dissecting the conjunctival flap and inserting the stitches allows the patient to settle down. The tenseness experienced (when the Graefe is used) while making the puncture and counter-puncture, cutting out along the line of the limbus and fashioning a conjunctival flap—often imparted to the patient by the surgeon exhorting him to look down—does not enter into the picture at all.
4. The conjunctival flap can be cut to the desired width and the surgeon is always assured of a good flap covering the whole incision.
5. He is able to place his incision accurately at the desired spot, the limbus, where he intends to cut out when using the Graefe, but which often does not go according to plan.
6. He never makes a corneal section.
7. There is less likelihood of injuring the iris, because it cannot float up in front of the keratome.
8. The anterior chamber is retained longer.
9. The surgeon is able to make his incision in a bloodless field, because all external bleeding points are easily controlled by means of a heated probe.

Post-operative advantages.

(1) More rapid re-formation of the anterior chamber and closure of the wound.
(2) Less tendency to prolapse of the iris.
(3) Incidence of hyphaemia less.
(4) Post-operative astigmatism less.

REFERENCES

1. Kirby, D. B. (1950): *Surgery of Cataract*. Philadelphia: J. B. Lippincott Co.
2. Stallard, H. B. (1946): *Eye Surgery*. Bristol: J. Wright and Sons, Ltd.
3. Arruga, H. (1952): *Ocular Surgery*. New York: McGraw-Hill Book Co.
4. O'Brien, C. S. (1943): Amer. J. Ophthal., **26**, 508.

VACCINATION AGAINST TUBERCULOSIS

There is now convincing evidence that a specific resistance to tuberculosis can be induced by vaccination. Many problems concerning this vaccination have still to be solved however. A recent WHO technical report [1] provides up-to-date information concerning such problems and points out the subjects on which further study is required. This report, the result of discussions of the WHO Expert Committee on Tuberculosis, deals particularly with BCG vaccination, though brief consideration is given to two other types—with vole bacillus and with killed tubercle bacilli—that are still in the experimental stage.

Techniques of administration of BCG vaccine are an interesting point of discussion in the report. Consideration is given to oral BCG vaccination, a technique widely used in certain countries of South America. It seems that this form of vaccination can be carried out without inconvenience even in tuberculin reactors. There is evidence, however, that not every vaccine is suitable for this purpose, and it would be premature to recommend that this method of vaccination be generally adopted.

Intradermal vaccination is satisfactory for mass vaccination campaigns.

A certain percentage of complications may be expected with any vaccine and any method of administration. The aim should be to use a vaccine which gives the smallest number of complications and yet produces a satisfactory allergy. It is emphasized in the report that small abscesses at the site of vaccination, healing within two months, or non-suppurative regional adenitis of moderate degree should not be considered as complications.

What dosage of tuberculin should be used in surveys to determine who should be vaccinated? The report states that studies on this question support the view that the use of a single Mantoux test of 5 tuberculin units (TU) is satisfactory and practical for selecting individuals for vaccination. This test should therefore continue to be used in mass vaccination programmes, and the arbitrary definition of tuberculin reactor should continue to be based on the presence of an induration of 5 mm or more in diameter at the end of three days.

Certain principles are set forth with regard to the selection of groups to be vaccinated in mass BCG programmes. In areas with a high prevalence of tuberculosis, mass vaccination should cover all age-groups from one year to that in which 80%–90% reactors to tuberculin are found. Although vaccination of the newborn would also be highly desirable in such areas, this group would best be dealt with outside the mass vaccination programme. In areas with a low and decreasing tuberculosis prevalence, where mass vaccination of the whole population is not carried out, the selection of age-groups for vaccination should be determined in accordance with the epidemiology (including age distribution) of the disease.

Post-vaccination testing should be carried out with the same test that is used for selecting subjects to be vaccinated, and the results should be expressed not merely in terms of percentage of reactors, but quantitatively.

Sample checks of those vaccinated in mass programmes should be carried out periodically to see whether satisfactorily high and constant levels of allergy are maintained.

Large-scale control trials are at present being made in the U.S.A. and in Great Britain to assess the degree of protection given by BCG vaccination in different sections of the population. Also of interest are efforts being made in Finland [2] and in Denmark to assess the protective value of BCG—in the former through a national vaccination roster, and in the latter through a tuberculosis index.

REFERENCES

1. *Vaccination against Tuberculosis*; *Sixth Report of the Expert Committee on Tuberculosis* (World Health Organization Technical report series No. 88.
2. World Health Organization, 1954, **8**, 241.

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VAN DIE REDAKSIE

DIEET EN GEDRAG

Die uitwerking van die dieet op die mens se verstand en gedrag is 'n interessante aspek van voeding wat nog nie deeglik ondersoek is nie. Daar is behoefte aan verdere navorsing op hierdie gebied. Die probleme is gewigtig weens die veelvuldige faktore wat daarby betrokke is; rekening moet gehou word nie net alleen met die dieet, eetgewoontes, emosie en gedrag, en die simboliese aspek van eet en spyse nie, maar ook met die verstandelike en liggaamlike veranderings wat aan 'n tekort van voedselfaktore te wyte is. In die Westerse lande is sorgvuldig gekontroleerde navorsing in intelligensie en persoonlikheid op 'n redelik bevredigende kwantitatiewe basis uitgevoer maar die metodes kan nie op die inboorlinge van Afrika, Asië en sekere ander gebiede toegepas word nie.

'n Belangrike kenmerk van kwashiorkor is die geestessteurings wat altyd by pasiënte voorkom—verstandelike dooierigheid, stompsinnigheid en norsheid as hul gesteur word. Ondervoeding knak die intellek en persoonlikheid van baie naturellekinders as hul vergelyk word met hul tydgenote wat behoorlik gevoed is. Ouer persone wat af en toe, of gereeld, ondervoed word, word op soortgelyke wyse aangetas. Dit is al jare gelede bevind dat naturellestamme in Noord-Rhodesië wat van vis lewe oor groter uithoudingsvermoë, lewenskrag en bekwaamheid beskik as ander stamme wie se kos hoofsaaklik uit giers bestaan. Die verstandelike dooierigheid en stuursheid wat laasgenoemde toon, word aan 'n gebrek aan die vitamien-B-kompleks toegeskryf. Verdere kliniese studies en proefnemings oor voeding en die toepassing van antropologiese, sosiologiese en sielkundige tegnieke is nodig om die verhouding van die dieet tot die psige te verduidelik.

Oorloë en konsentrasiekampe op die Vasteland het geleenthede aangebied om tot 'n mate die sielkundige en ander gevolge van hongersnood te bestudeer. Die rol wat die dieet in die ontwikkeling van sielkundige stoornisse by mediese en chirurgiese pasiënte, of in hul herstel, speel, is in baie dele van die wêreld bestudeer.

Die Wêreld-Gesondheidsorganisasie het sommige van die bogemelde vraagstukke oorweeg en verslae gepubliseer o.a. oor *Kwashiorkor* en oor *The African Mind in Health and Disease*.

'n Vraagstuk wat in noue verband hiermee staan, is

EDITORIAL

NUTRITION AND BEHAVIOUR

An interesting but as yet inadequately investigated aspect of human nutrition is the gross and the more subtle effects of diet on the human mind and behaviour. More research is required in this field. The difficulties are great on account of the complex factors involved; the studies must take into account not only diet, food habits, emotion and behaviour, and the symbolic aspects of food and eating, but also the mental and physical changes conditioned by deficiencies of food factors. Carefully controlled investigations into the intelligence and personality on a reasonably satisfactory quantitative basis have been used in the western world, but the methods are inapplicable to native populations of Africa, Asia and certain other areas.

Mental changes are considered to be a consistent and important feature of kwashiorkor—mental apathy, dullness, with peevishness when disturbed. Through malnutrition many African children suffer injury in personality and intelligence in comparison with their better-fed contemporaries, and older subjects suffer similarly from occasional or regular undernourishment. Fish-eating tribes in Northern Rhodesia were found many years ago to have greater endurance, vitality and ability than other peoples who subsisted mainly on millet. The mental apathy and irritability of the latter has been attributed to prolonged deficiency of vitamin-B complex. More detailed clinical study and feeding experiments, and the combined use of the techniques of anthropology, sociology and psychology, will be needed to solve the problem of nutrition in relation to the psyche.

In Europe the wars and their concentration camps provided opportunities for studying in some degree the psychological and other effects of starvation. Finally, in many parts of the world much study has been devoted to the effects of dietary influences in the development of psychological disturbances in medical and surgical patients, or in their restoration to normal.

The World Health Organization has considered some of the above problems and has published reports e.g.

die neurologiese invloed van stikstofverbindings wat tydens lewersiektes die bloedsomloop binnedring. Bewyse is in 'n onlangse verslag [1] aangevoer dat (vergiftigende) stikstofstowwe wat van die poortaar deur die beskadigde lewer of sy kollateraalpoortkanale tot in die groot bloedsomloop vloei 'n diffuse serebraalstoornis kan veroorsaak. Pasiënte wat aan verskillende lewerkwale ly, toon dieselfde neurologiese beeldpatroon wat net in graad, duur en omvang verskil. Die kenmerke dui op 'n metaboliese oorsprong. Tot nog toe is bloedammonium die enigste benadering wat met die neurologiese komplikasies korreleer. Dit word veronderstel dat as 'n stikstofbevattende stof deur 'n beskadigde lewer gaan dit diffuse serebraal-vergiftiging (*portal-systemic encephalopathy*) kan veroorsaak. Hierdie toestand moet altyd in gedagte gehou word in die geval van pasiënte wat die kenmerkende verwarring van die bewussyn en motoriese funksie toon, wat met lewersiektes gepaard gaan. As gevolg van hul anti-sosiale optrede en verskole fisiese tekens, kan pasiënte verkeerdelik as hopelose neurologiese of psigiatriese gevalle bestempel word. Dikwels word vir lewerkwaalpasiënte 'n dieet voorgeskryf met 'n inhoud hoog aan proteïen, kasiënhidrolisate en amino-sure, en ammoniumkloried. Alhoewel daar nie noodwendig 'n teenaanduiding vir die gebruik van hierdie stikstofbevattende voedselfaktore bestaan nie, moet hul potensiële gevare nie oor die hoof gesien word nie. In baie gevalle moet die hoeveelheid stikstof wat by wyse van kos of geneesmiddels ingeneem word tot 'n minimum beperk word.

Kliniese en eksperimentele studies in hierdie rigting sal die welbekende verband tussen kwale van die lewer en skade aan die brein kan verklaar.

1. Sherlock, S., *et. al.* (1954): Lancet, **2**, 543.

on *Kwashiorkor* and on *The African Mind in Health and Disease*.

An allied subject is the neurological influence of nitrogenous compounds entering the circulation in liver disease. In a recent report [1] evidence has been adduced that (toxic) nitrogenous substances passing from the portal vein to the systemic circulation through a damaged liver or its portal collateral channels can cause a diffuse cerebral disturbance. In patients with liver disease due to various causes a neurological picture was observed having a common pattern but differing in degree, duration and extent. The characteristics favour a metabolic origin. At present the blood-ammonium is the only estimation which correlates closely with the neurological complications. It is believed that a nitrogen-containing substance passing through a damaged liver can cause diffuse cerebral intoxication (portal-systemic encephalopathy). This condition should always be considered in patients with the characteristic disorder of consciousness and motor function associated with liver disease. The patients may be wrongly regarded as hopeless neurological or psychiatric cases, because of their anti-social behaviour and obscure physical signs. Frequently high protein diet, casein hydrolysates and amino-acids, and ammonium chloride, are given to patients with liver disease. While not necessarily contra-indicated the potential dangers of such nitrogenous food factors must be recognized. In many such cases nitrogen intake should be reduced to a minimum in food or drugs.

The long-established relation between liver disorder and brain damage may be explained by clinical and experimental studies on these lines.

1. Sherlock, S., *et al.* (1954): Lancet, **2**, 453.

ACCIDENTS

Accidents account for a substantial proportion of deaths in the modern civilized community. The quarter-million road accidents in Britain last year alone accounted for over 5,000 deaths and 50,000 serious injuries —mortality-morbidity figures sufficiently dreadful to shock the most complacent citizen into self-reproach. It reminds one, as one official remarked, of 'the Gadarene swine, so intent do we appear to destroy ourselves in our land'.[1]

Quite apart from the loss of life, the volume of preventible casualty at the average general hospital is frequently sufficient to overcrowd and even to cripple the treatment facilities for in-patients and out-patients. Criminal abortions, stab-wounds and traffic accidents have long been a headache to hospital superintendents and many openly begrudge the constant filling-up to capacity of all available space with this class of patient to the exclusion of the chronic or 'cold' case. This is most frequently seen in the Native wards, where the tendency for a general hospital to resemble a casualty station is most marked.

In casualty departments the accidents treated are probably most frequently from the sports-fields or the highway, but a large number come from the home as well, relatively few from factories and industry. In this respect our social legislation is very defective; while industrial preventive health legislation has kept abreast of modern development, little thought and less action has been expended on the problem of preventible accidents in the home and on the highway. For example, the most severe burns are always from the home and most commonly seen in children under 5 years of age; industrial legislation has rendered factories 'safe'. Ill-lighted stairs, unsafe ladders, tools in poor repair, and insufficient protection in the kitchen against scalds and burns, are all preventible sources of death and distress.

In Cape Town the deaths from traffic accidents amount to one per day, usually either small children 'run over' whilst playing in the street, or old people whose senses are no longer sharp or who have never developed 'traffic-sense'. Drunkenness accounts for some of these deaths, and also reckless driving; but the radical remedy lies in keeping pedestrians off busy traffic-lanes altogether, providing playing-fields for the children near their homes, and planning cities with traffic-free shopping centres that are within easy reach of transport.

There is no sport under the sun that does not involve some hazard to life and limb. In fact, much of the savour of manly exercise is the element of danger that it holds for the participant. Here the preventive remedy lies not only in protecting the body with padding but also in developing a degree of muscular co-ordination and physical resilience that can counter the risk of sprains, fractures, concussions and eye injuries.

The pattern of accidents and their prevention—with the exception of industrial injuries—has received scant attention from the medical world. It remains an almost virgin field for research, and one which no modern community can afford to neglect. When millions are spent on combating the other 'killers'—malignant disease, tuberculosis and syphilis are examples—why is the most obviously remediable problem left untackled?

1. Gissane, W. (1954): The Practitioner, **172**, 620.

BLINDNESS AND MALNUTRITION IN THE EASTERN CAPE PROVINCE*

C. J. BLUMENTHAL, M.S. (LOND.)

East London

In a previous paper [1] the author stated that corneal lesions occur chiefly in the *young* Bantu. Later work has shown an even more definite age-pattern for this common condition (Tables I and IIa).

Malnutritional keratoconjunctivitis in the Bantu occurs mainly in the 2-3 years following weaning from the mother's breast-milk (Tables I and IIb). Bantu mothers breast-feed their babies to a relatively late age, 2 years being a fair average. The age of 2-5 years might be called the age of hazard, of the acute phase, or of onset (Fig. 1). This is the period of (*a*) rapid, localized, corneal liquefaction or 'lysis', usually with perforation and 'clean' or 'spontaneous' prolapse of the iris and marked absence of signs of infection; or (*b*) generalized corneal stromal softening, followed later by bulging of the cornea in whole or in part, and the formation of various types of staphyloma or ectasia a year or two later, also without infection.

After the age of 5 years, the number of 'acute' cases rapidly declines, to be followed by a smaller, sharp rise at the age of 10-15 years (Fig. 1), caused probably by the increased metabolic demands of puberty (cf. myopia and conical cornea). The eye picture in this group is somewhat confusing. The usual appearance is that of new surface ulceration superimposed on older prolapses and healed scars. Prolapse is less common, but sometimes a new perforation and prolapse is seen in the centre of an old healed scar. The conclusion one is bound to draw is that these acute-on-chronic exacerbations are merely the lighting-up of the post-weaning condition. After adolescence the pure acute forms are rarely seen, a secondary acute or chronic surface infection or catarrh taking their place and superficially masking the stigmata of the earlier years.

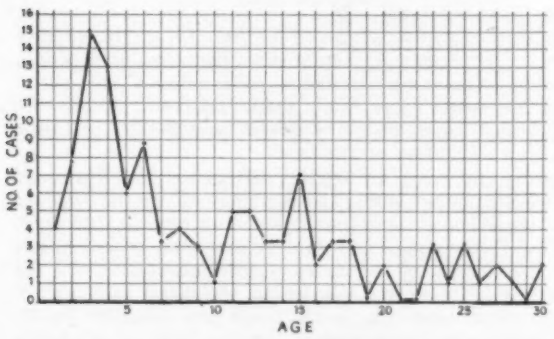

Fig. 1. Blindness (temporary and permanent) from Malnutritional Keratitis (all forms: acute, exacerbations on healed, old-healed) by age up to 30 years. Out-Patient Eye Clinic, Frere Hospital, East London. March 1950–June 1952.

* A paper presented at the South African Medical Congress, Port Elizabeth, June 1954.

Enquiry into the diet of the 2-5 year age-group reveals a disquieting picture, the simmering porridge-pot occupying the foreground. Mealie-meal in one or other form (unsupplemented by sweet or sour milk, greens or fruit) is the staple diet. Jackson [2] states that the following vital constituents are deficient in such a diet: protein, fat, calcium, iron, vitamin-B complex, ascorbic acid. Not until the toddler goes foraging for himself with older children for roots and berries, birds and their eggs, small animals and insects, does he find the necessary vitamins, or, as Jackson [3] suggests, trace elements. In locations and towns this foraging is often on rubbish dumps etc., where meat, fruit and vegetable refuse may be found.

Whatever the explanation, there are fewer 'new' cases at the age of 5-10. A second reason may be that by this time the corneal framework is tough enough to withstand all but the severest shocks. Both factors probably pertain.

There is clinical evidence in abundance to support my view that all shades and gradations of damage to corneal connective tissue take place during the critical age of 2-5 years. I say 'connective tissue' because the damage is initially stromal or mesodermal, and not epithelial. Sections of early 'clean' prolapse of the iris *with the corneal epithelium still intact* are evidence of this. In 2 cases the iris bulge with its unbroken covering of epithelium was large enough to excise tangentially. The disappearance of Bowman's membrane as seen in section (Fig 2) does not vitiate the evidence, for this membrane is notoriously sensitive and has no power of repair. It seems most unlikely

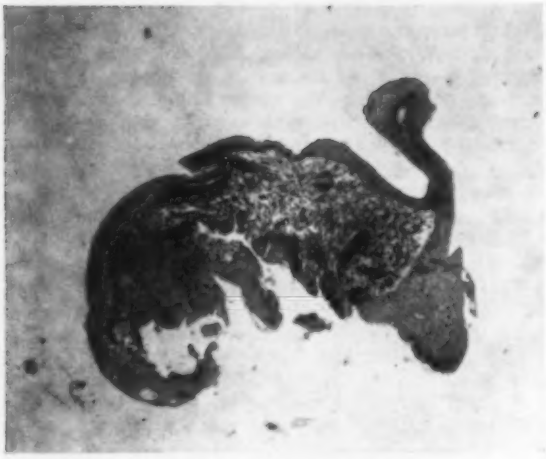

Fig. 2.

that the epithelial layer once broken or ulcerated would regenerate and re-cover the knuckle of iris. Clinical experience is against this; and serial sections have failed to show evidence of regenerated epithelium. (In a previous paper [1] I described a case where the mechanics appeared to be reversed, namely where the corneal stromal break-through had taken place first anteriorly through the epithelium, and an unbroken descemetocoele covered the prolapsing knuckle of iris. Sooner or later pressure and secondary infection must lead to the rupture of either of these two delicate membranes.)

The substantia propria (and the conjunctival submucosa) appear to suffer severe injury in infancy, and from this they never fully recover.

Many Bantu eyes examined in adolescence and adult life show an irregular corneal astigmatic 'swirl' on retinoscopy, this being, I believe, the least naked-eye clinical evidence of a *minimal* 'attack' of malnutrition in infancy. The slit-lamp or loupe fail to show the faintest nebulae. Were these eyes available for section, the microscope might show a mechanical disturbance of the laminations of the substantia propria.

I suggest there also occurs a '*subminimal*' degree of damage on a delicate chemical and physiological level during the formative years. That the affected eyes should at a later stage be less resistant to secondary infections (including even trachoma) is a postulate that cannot be lightly cast aside by enthusiasts of the 'dirt, flies and germs' school of thought. Young, immature tissues, injured in any way, will attract insect pests and favour bacterial growth, no less in man than in all of Nature's growing things. A young tree or its branch, receiving such a setback, is prone to fungus, virus and bacterial disease; so is the chemically deprived framework of the cornea.

The much-maligned house-fly is *attracted* to any discharge, whether sterile (e.g. blood, sweat, tears and mucus), or septic. Is it not more logical to regard its presence as a *sign* of disease rather than its cause? The evidence that the fly plays more than a minor role in the spread of trachoma, is in my opinion very thin indeed. If the virus of trachoma is in the conjunctiva, it must also be in the tears, tear-duct, nose, fauces and saliva. Normal speech sprays a cone of infected droplets measuring 6 feet by 6 feet into the air ahead of the speaker. Surely this should accomplish the spread of infection more effectively than a myriad flies! Isolated surveys, on subjects old enough to have recovered from the *grosser* stigmata of malnutrition (e.g. in hair and skin, etc.), will naturally lead to the discovery of superimposed secondary condition, such as germs, flies, and dirt. Crippling conditions like near-blindness, coupled with racial indolence and *laissez faire* will certainly not inspire a state of vigour and cleanliness.

The substantia propria is the main framework or supporting structure of the cornea. It also carries the nutritive 'circulation' necessary to maintain its own health and that of its protective membranes. That the whole structure might suffer injury from malnutrition during the crucial and formative post-weaning period is not an unreasonable suggestion.

The etilogy of virus diseases of the eye, and trachoma in particular, is a long way from a satisfactory solution. A quite undeserved significance has been attached to inclusion-bodies. They were first discovered in scrapings by Prowazek in 1907, since that time identical dots have been found in other conditions. The presence of a virus in swimming-bath conjunctivitis, psittacosis, lymphogranuloma, vernal catarrh, inclusion blennorrhea (paratrachoma), or trachoma, has never been conclusively proved.[4, 5, 8] The latest addition is an abacterial urethritis which shows the same non-specific intracellular dots. Abu-Jaudeh in an excellent paper [6] states that a healthy patient may act as a carrier by by harbouring what he calls 'trachoma bodies' in his eyes, nose or urethra. He feels that inclusion-bodies are pathognomonic of trachoma, but admits that they 'have many features in common' with those of other conditions. It seems that there exists some doubt in the minds of the virus experts as to the true nature of the inclusion-body. If it can occur as a 'commensal' in the conjunctiva, nose and urethra, if it can be 'carried' in the same way as the common bacteria (streptococci, staphylococci, pneumococci, etc.) without any actual disease, what more likely than that communities with damaged tissues of low resistance should show inclusion bodies in routine scrapings.

The discovery of whole villages in the Transvaal supposed to be suffering from trachoma [7] on the evidence of these bodies must be viewed with reserve. So wary have I become of the clinical diagnosis of trachoma, that I employ as an important criterion of diagnosis the intractability of the disease to the usual methods of treatment, especially in the acute and subacute forms. Many papers have appeared on the 'cure' of trachoma with sulphonamides and antibiotics. Disappointingly, my cases have not shared the same happy fate. A superficial clearing-up of the more messy features of the condition certainly takes place, but no more so than on irrigations with normal saline and the improved diet and soap-and-water tidying-up of hospitalization. I

admit in all humility that the copper stick of Tutankhamen's day, combined with expression, is still my method of choice in the 'stubborn', i.e. the true trachoma, cases.

I fail to see why *any* chronic catarrh of the conjunctiva or corneal epithelium, acting over many years because of an underlying poor tissue-resistance, should not in the end produce the same clinical picture as chronic trachoma—namely pannus, scarring of cornea and lids, Herbert's pits, entropion and trichiasis, whether the bacteriology yields staphylococci, pneumococci, Koch-Week's bacilli, or the inclusion bodies of a presumptive virus.

Before dogmatizing on trachoma, we should bear in mind the following points:

(1) The varying definition of trachoma adopted by different workers.[8]
(2) The varying results obtained in attempting to pin down a causative organism.[8]
(3) The non-pathognomonic nature of inclusion bodies.[8]
(4) The non-specificity of any of the physical signs of trachoma: pannus, folliculosis, Herbert's pits, corneal scarring, lid fibrosis and trichiasis. Each or all of these can be mimicked in varying degrees by a variety of conditions.
(5) The absence (in my experience, total) of trachoma in the indigenous white population of South Africa.
(6) The great infrequency with which doctors and nurses working continuously with the condition contract the disease. Those of us who worked in trachoma clinics overseas were often tired, overworked, run-down, but at least we lived on sufficient diets and, more important, had done so since infancy. How many of us bothered to use the goggles provided for examining trachoma patients?
(7) Dirt and squalor have been named as the villains of the piece. Dirt is the handmaiden of poverty and poverty goes hand-in-glove with ignorance and the cheap carbohydrate diet.

Do the children of the affluent contract trachoma in later life, whether Bantu, Irish, Hebrew, Pole, Eastern European, Turk, or Arab? The wrong diet at an early age, and not dirt, is, I think, the important factor.

Out of 1,192 consecutive outpatients at the Frere Hospital (Fig. 2) there were 17 (1·4%) cases of trachoma (acute and chronic) (Table I):

Age-group (years)	*Cases*
1— 5	0
5—15	1
15—30	7
30—50	5
50—90	4

Compare this with malnutritional keratitis (acute, sub-acute and old cases). There were 157 cases (13·2%) in this group.

Age-group (years)	*Cases*
1— 5	57
5—15	58
15—30	29
30—50	11
50—80	2

From these figures it is apparent that malnutritional keratitis is a disease of infancy, and trachoma one of later life, which suggests that the former is a failure of structure, and the latter a defect of tissue resistance. Why should the two not be related?

A striking feature is the relative absence of healed forms of malnutritional keratitis in older patients. A representative cross-section of the eye population attends clinics, and one would expect to see more of these scarred eyes in the later age-groups. Is the explanation (*a*) that malnutritional keratitis has considerably increased over the last 30 years? or (*b*) that there is an early and higher mortality amongst them? A lowered *general* connective tissue resistance (clinically imperceptible), marching *pari-passu* with the clinically obvious changes in the sensitive infantile eye, could account for this. The highly specialized corneal tissue should, after all, be more susceptible. I think both factors are at work.

A recent statement to the effect that the vast majority of corneal scars in the Bantu are the direct result of primary bacterial infection must be contested. Its 'corollary' is totally untrue, 'that they follow neglected corneal ulcers'.[7] Unfortunately, when this statement was published, I had already compiled the 1948-50 statistics (Table I), and had lumped together all corneal scars (infective, traumatic and of doubtful origin) in

TABLE I. ANALYSIS OF 1,192 CONSECUTIVE NEW OUT-PATIENT CARDS AT FRERE HOSPITAL EYE CLINIC (1948–50)—ALL CASES

Age-Group (Years)	*Malnutritional Keratitis (Old and New)*	*Cataract*	*Infective Ulcers and Scars**	*No Apparent Disease*	*Acute Conjunctivitis (all types)*	*Refraction*	*Primary Glaucoma*	*Miscellaneous†*	*Trauma*	*Trachoma*	*Totals*	*Percentages*
1— 5	57	2	15	3	13	1	0	18	6	0	115	9·7%
5—15	58	3	15	24	7	6	0	50	8	1	172	14·4%
15—30	29	5	34	62	26	31	2	106	38	7	340	28·5%
30—50	11	15	46	54	19	52	5	79	29	5	315	26·4%
50—90	2	98	13	17	9	48	19	38	2	4	250	21·0%
Totals	157	123	123	160	74	138	26	291	83	17	1,192	
Percentages	13·2%	10·3%	10·3%	13·4%	6·2%	11·6%	2·2%	24·4%	7·0%	1·4%		100%

* Recent and acute infective ulcers and old scars of infective or doubtful origin.
† Tearducts, phlycten, fundi, etc.

one group. There were 123 (10·3%) in this group as against the 157 (13·2%) of malnutritional keratitis already mentioned. Bearing in mind the high incidence of trauma in the Bantu, I doubt whether more than 0·5% of all forms of corneal scarring are due to acute infections or neglected corneal ulcers. This is borne out by the later series 1950-52 (Table IIa), where only 2 eyes out of 895 were found blind from bacterial infection. My recollection of 7 years of practice in Johannesburg is that the picture is about the same as for the Eastern Cape.

Neglect not being confined to any race or class, one must consider the many 'neglected' primary mucopurulent infections which do not go on to corneal ulceration; and when they do, how few of them end up with a corneal perforation! (One excludes the vicious but fortunately now rare gonococcal conjunctivitis. In my own experience, attack by the common conjunctival pathogens (staphylococcus, pneumococcus, Koch-Weeks's bacilli etc.), whether treated or not, only very rarely leads to corneal involvement in the European or Bantu, and when it does the picture is very different from that of the malnutritional scar.

I have only meagre clinical evidence to support my view that the initial intracorneal softening is caused by a vitamin-B deficiency, and the secondary surface catarrh and ulceration by lack of anti-infection vitamin A. Multi-vitamin treatment certainly leads to a rapid and dramatic healing of the condition if taken early, and this without any local treatment to the eye.

I have hospitalized a few of these early cases and tried to keep them on the mealie-pap diet of the kraal, with the addition of only vitamin-B complex, and no local treatment. At the end of a week it appears that the deeper corneal component is arrested, but the eye continues to look inflamed and 'unhappy' if surface infection should be present. The addition of vitamin A appears to clear the surface condition. But hospital facilities are always in short supply, and there are factors beyond one's control (e.g. 'tit-bit' feeding of the child by other patients, etc.); so until opportunity allows of a fuller investigation, the actual vitamins or trace elements involved are a matter for surmise.

It has been suggested that the condition I described and named malnutritional kerato-conjunctivitis is really keratomalacia, leading on from xerosis. I have never seen a case or photograph of keratomalacia in England or South Africa which fits the classical description. I have read and re-read Duke-Elder's description,[9] which summarizes the work of a large number of authors, and fail to recognize the condition. I give the following differences between keratomalacia as he summarizes it and the condition I call malnutritional-keratitis:

1. What are 'Bitot's spots'? I have never seen anything remotely resembling them in the Bantu.

2. The characteristic 'clean' corneal liquefaction and 'quiet' iris prolapse[1] receives no mention in Duke-Elder. The phenomenon is so striking, the picture, so clear cut, that this is surprising. One would not expect a succession of alert clinical observers to miss the oft-repeated picture of a symptomless perforation re-

TABLE IIA. ANALYSIS OF 895 BLIND EYES: FRERE HOSPITAL OUT-PATIENTS DEPARTMENT. MARCH 1950—JUNE 1952

Senile Cataract	236
Malnutritional Keratitis	214
Trauma	97
Chronic Glaucoma	64
Scars of Unknown Origin	34
Complicated Cataracts	26
Optic Atrophy (All causes)	24
Iridocyclitis	19
Macular Conditions	17
Pseudo-Trachoma (Chronic Catarrh and Triachiasis)	15
Cerebral Tumours, Encephalitis, etc.	15
Congenital Cataracts	12
Choroido-retinal Conditions	12
Interstitial Keratitis	10
Amblyopia ex Anopsia	9
Gonococcal Ophth. Neonatorum	8
Retinitis Pigmentosa	8
Trachoma	7
Buphthalmos	6
Corneal Dystrophies and Degenerations	6
High Myopia	6
Phthisis Bulbi	6
Pseudoglioma and Retrolental Fibroplasia	5
Morgagnian Cataracts	5
Albinism	4
Conical Cornea	4
Microphthalmos	4
Detached Retina	3
Local Tuberculosis of Eye and Orbit	3
Infective Corneal Ulcers	2
Disseminated Sclerosis	2
Panophthalmitis	2
Herpetic Ulcer	2
Retrobular Tumour (Hydatid Cyst)	1
Congenital Nystagmus	1
Retrobulbar Neuritis	1
Measles Keratitis	1
Ocular Pemphigus	1
Fascicular Ulcer	1
Lymphangioma	1
Spontaneous vitreous haemorrhage	1

TABLE IIB. MALNUTRITIONAL KERATITIS. ('NEW' AND 'OLD' CASES). ANALYSIS OF AGE-GROUPS. 133 PATIENTS (WITH ONE OR BOTH EYES TEMPORARILY OR PERMANENTLY BLIND). FRERE HOSPITAL OUT-PATIENTS DEPARTMENT 1950–52

Age (Years)	*Eyes*	*Age (Years)*	*Eyes*
1	6	23	3
2	10	24	1
3	14	25	3
4	15	26	1
5	7	27	2
6	11	29	1
7	4	30	2
8	4	31	1
9	3	34	1
10	1	35	3
11	5	38	1
12	7	39	1
13	3	40	3
14	3	41	1
15	8	44	1
16	2	52	1
17	3	56	2
18	4	60	1
20	1	62	2
		65	1

Age-Groups	*Cases*	*Age-Groups*	*Cases*
1— 5	46	41—50	6
6—10	20	51—60	2
11—20	34	61—70	3
21—30	13	71+	0
31—40	9	Total	133

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step 1

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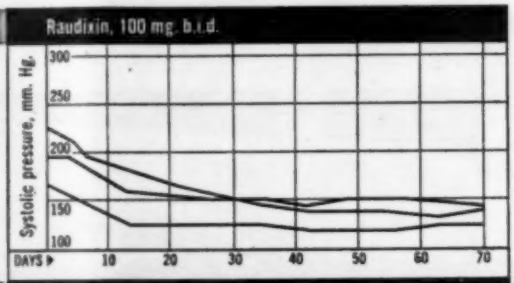

step 2

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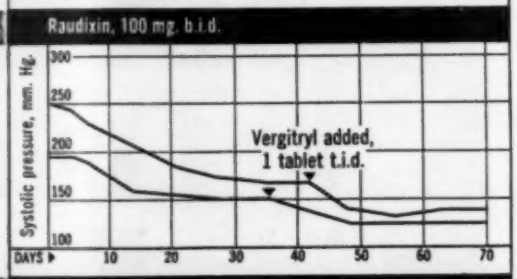
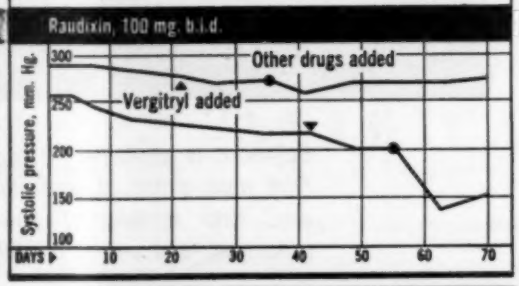


step 3

For the few patients resistant to this combined regimen, a more potent drug may be added, for example, hexamethonium. The most potent drugs, which are potentially dangerous are thus used only as a last resort in the most refractory cases.



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stricted to the lower-half of the eye, at a constant distance of 1 to 2 mm. from the limbus and free of all signs of inflammation.

3. This type, and the other forms I have described, are easy to photograph or sketch. In Duke-Elder's book there is only one diagram on which I will not comment.

4. Duke-Elder's summary stresses the occurrence of hypopyon. I have seen this occur only rarely in many hundreds of cases over a period of nearly 15 years, and only when *gross* secondary infection has taken place. A feature of malnutritional keratitis is secondary *surface* infection. There is, however, an extraordinarily high resistance to anterior chamber infection.

5. Drying and leatheriness with wrinkled folds of conjunctiva are stressed in xerosis and keratomalacia, and also exfoliation of the epithelium and a thick yellowish-green discharge. None of these is characteristic of malnutritional keratitis; in fact the very opposite, an increase of wetness and secretions without discharge, is the case.

6. Mention is made of the appearance in keratomalacia of something similar to an arcus senilis at the limbus.

7. No mention is made of 'nipple' and 'pseudobuphthalmic' staphylomata which, although admittedly rarer, are striking primary conditions and occur early and in uncomplicated form in malnutritional keratitis, very often in association with a 'clean prolapse' in the fellow-eye.

8. The 'marasmic' baby is mentioned in keratomalacia. Marasmus is not typical in malnutritional keratitis; the fat, podgy, watery, carbohydrate baby is more in evidence.

9. Weight is given to 'pannus' in keratomalacia. I agree that pannus can occur in the late stages, when a secondary catarrh has supervened; but pannus is merely a descriptive term for blood-vessels crossing the limbus, and can be produced by a number of other conditions. Pannus unfortunately often leads to the mistaken diagnosis of trachoma.

10. Xerosis and keratomalacia are said to involve ectodermal tissues. As I have said I think there is evidence that malnutritional keratitis is mesodermal in its origin.

Possibly the name keratomalacia was originally given to a single eye condition, but has been used indiscriminately to describe a hotch-potch of conditions in the Middle and Far East, many of them no doubt dietetic in origin. Trachoma has also suffered in some degree from inexact observation and bad reporting.

I wish to thank Dr. M. M. Friedman of the East London Pathology Department for his kindly help with sections and colour photograph, Dr. Chait for the laborious compiling of the 1948-50 statistics and others for similar help, Miss Lord, Out-patient Sister at the Frere Hospital, for her never-failing assistance, and Dr. B. Bromilow-Downing, Superintendent of the Frere Hospital, for permission to publish cases.

SUMMARY

1. Statistics and case histories strongly suggest that malnutritional keratitis occurs in the 2-5 year age-period (the post-weaning period) in Bantu infants.

2. Sections of 'clean' prolapsed irides suggest that the condition starts deep and not superficially, and is primarily a failure of mesodermal eye tissues.

3. It is suggested that the later manifestations of the conditions, e.g. secondary infections (and probably others such as trachoma), might stem in part from this early connective-tissue damage and damage to the corneal 'circulation', and that it can occur on a delicate chemical and physiological level without gross naked-eye evidence of the condition.

4. Flies, germs and dirt are only incidentals in 'damaged' and backward communities and not the cause of the damage'.

5. Trachoma is a relatively uncommon disease in the Bantu and is frequently misdiagnosed; and none of its features are specific. Inclusion-bodies, on the evidence available, are not diagnostic.

6. A recent assertion that the vast majority of corneal scars in the Bantu are the direct result of primary bacterial infection and neglected corneal ulcers is vigorously contested.

7. Malnutritional keratitis is not the same condition as keratomalacia as has been suggested. A number of differences are cited in support.

REFERENCES

1. Blumenthal, C. J. (1950): S. Afr. Med. J., **24**, 191.
2. Jackson, J. H. (1952): *Ibid.*, **26**, 501.
3. Idem. (1954): *Ibid.*, **28**, 305.
4. Anderson, W. A. D. (1949): *Pathology*, p. 764. London: H. Kimpton.
5. Blodi, F. C.: Abstracts Am. Jour. Ophth. No. 2, Vol. 37. Postic, S.: The Trachoma Problem. Klin. Monatsbl. f. Augenh. 123: 331. 1953.
6. Abu-Jaudeh. Am. Journ. Ophth. 36: 7. Part I, July 1953.
7. Graham-Scott, J., *et al.* S.A.M.J. 1953. Vol. 27. 593.
8. Principles of Bacteriology and Immunity. Topley and Wilson. 1948. Vol. 2, p. 1878.
9. Duke-Elder, W. S. (1940): Text Book of Ophthalmology, Vol. 2, p. 1754.

TRAUMATIC BISECTION OF THE OPTIC CHIASMA*

A CASE REPORT

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Injury to the optic chiasma is an uncommon accompaniment of head injury. In any series of head injuries the chiasma or other portions of the visual tracts may be damaged in several ways, but the rarest and most interesting injury is that which simulates a clean sagittal section of the chiasma with resultant complete bitemporal hemianopia. The mechanism of this injury has aroused interest ever since it was first reported, and the discussion must needs touch on the question of the macular fibres and their decussation, in the so-called sparing of the macula or otherwise. The following case is a classic example of such an in ury.

* A paper presented at the South African Medical Congress, Port Elizabeth, June 1954.

CASE HISTORY

W.M., a Coloured male aged 26, fell from a ladder on 12 June, 1948 and, among other injuries, his frontal bone was fractured the fracture line extending backwards along the roof fo the left

orbit as far as the body of the sphenoid. He was unconscious for several hours. On regaining consciousness he complained of visual loss and headache. On examination he showed a weakness of abduction and elevation of the left eye. There was no complaint of diplopia. Confrontation test showed a gross defect in the temporal field on both sides. Pupils were sluggish but reacted on both sides. Both fundi were myopic in appearance.

On 23 July 1948 I was able to examine him more fully. Corrected visual acuity was R 6/12 and L ? 6/60. The muscle weakness on the left had almost cleared. The fields (5/330 white) showed

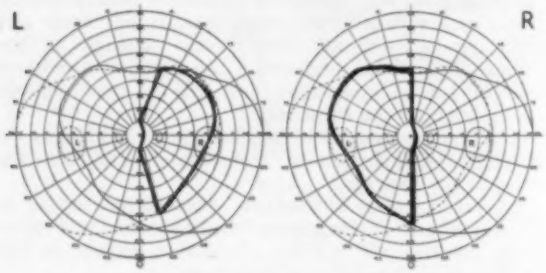

Fig. 1. 27 *July* 1948. 5/330 *white*. *Vision R* 6/12, *L* 6/60.

complete bi-temporal hemianopia which spared the macula on the right but extended across the fixation point on the left for several degrees (Fig. 1). Result. He could see the left half of the test line with the right eye but nearly the whole chart was obliterated on the left. At this stage already the nasal half of the left disc showed distinct pallor as compared with the right. On 14 August 1948 the hemianopia was confirmed as before; it was somewhat greater on the right but visual acuity had improved as follows: R with −3·30D sph=6/9 (L half of board); L with −1·25D sph—0·75 D cyl ax 150° =6/12 sometimes (R half) and together 6/9 (whole line).

The main complaint at this time was inability to identify objects and people and that there was very little field. Apparently he had not yet learned to join the halves of his fields, and in any case they did not fit properly. Early in 1949 this complaint was much less and he no longer complained of seeing only half the chart. By a trick of rotating his head he got the whole line. Visual acuity (corrected) was somewhat less (6/12 to 6/9). He also stated that he had had 2 fits—on the same day. These were periods of unconsciousness lasting on the first occasion several hours and on the second continuing nearly 2 days. He bit his tongue and wet his bed.

The fields now (1 February 1949) showed considerable contraction, still retaining their hemianopic character but extending

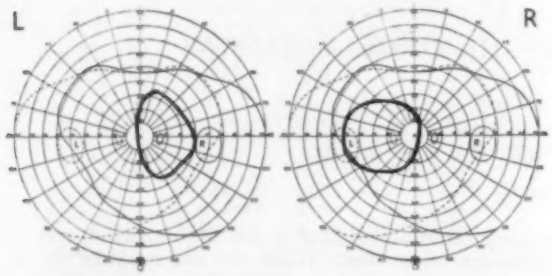

Fig. 2. 1 *February* 1949. 3/330 *white*.

on the nasal side to only about half the extent all round (Fig. 2). These contracted fields were demonstrated on several subsequent occasions.

He was readmitted to hospital for investigation. Neurological opinion was that these attacks were epileptic and occasioned by an organized clot and fibrosis or bony change in the anterior fossa in the pituitary region. An encephalogram gave no further information. It was decided, if vision showed further deterioration, to have the opinion of a neuro-surgeon with a view to exploration.

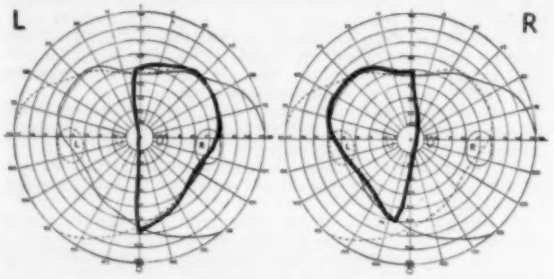

Fig. 3. 6 *September* 1949. 3/330 *white*. *Vision* 6/12 *partly*.

For some reason this course was not pursued and by 1 March 1949 the fields had improved. By 6 September 1949 full half-fields were again demonstrated (Fig. 3). Visual acuity was now R 6/12 full line, L 6/12 (R, half line).

The patient continued to have fits at intervals for about 2 years afterwards, never very incapacitating, but he had by this time been pensioned from his job. The fits gradually grew fewer and he no longer complained.

I have examined him at intervals since 1951, and the fields have remained constant.

The screen (3/1000 white) shows bisection of the macula on the R but a 1–2° inclusion of the fixation spot on the L within

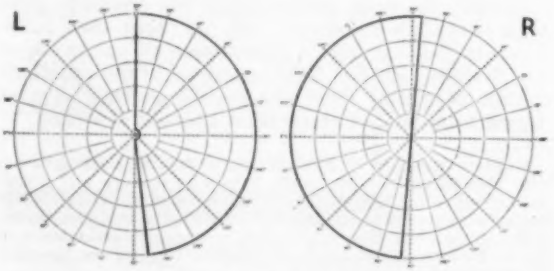

Fig. 4. 13 *November* 1951. 3/1000 *white*.

the obliterated area (Fig. 4). The last perimeter test (3/330 white) showed the R fixation point well within the field (Chart 5).

He has become quite used to his field loss and goes about without difficulty. He does not even depend on his glasses.

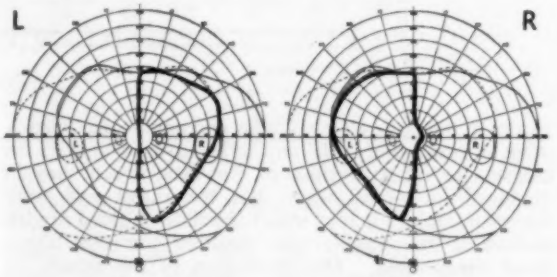

Fig. 5. 2 *March* 1954. 1/330 *white*.

MECHANISM DISCUSSED

Let us consider, firstly, how this injury may come about. Traquair, Dott and Russell,[1] in 1935, were able to collect data about 30 cases of this nature, including 3 of their own. In their analysis they discarded some cases as not being purely chiasmal. The earliest reported case was in 1883 (Nieden).

The simplest and possibly most natural explanation is that the chiasma is torn cleanly in an antero-posterior plane. This view was accepted by earlier writers, and considered to be proved by Liebrecht, who in 1906 first reported such a finding in a fatal head injury, and in 1912 was able to demonstrate actual separation of the two halves of the chiasma in a man who had sustained a head injury with resultant complete loss of the temporal fields. This patient died a few years later and came to autopsy.

The same view was supported by Coppez,[2] who in 1929 pointed out that these injuries usually occur in younger people with a resilient skull, and he sought to demonstrate an actual tear of the chiasma from the front. In the cadaver he removed the vault of the skull and split the frontal bone, and gradually widened the rent, thereby separating the optic nerves still fixed in their foramina, until the chiasma began to tear. However, he found that he had to increase the distance between the foramina from 12 to 22 mm. before the chiasma began to tear! Still, by making various reservations, he concluded that a frontally-applied force can rupture the chiasma by a momentary increase of only a few mm. in the transverse diameter of the anterior fossa.

However, when Traquair *et al.* made their comprehensive review they wrote: 'Division of the chiasma by displaced bone can with confidence be excluded as a cause. The chiasma lies at least one centimetre above and behind the optic groove and in no case was there evidence of gross bony displacement in this situation'. They stated that the obvious alternative explanation was interruption of the blood supply. They demonstrated a similarity in the progressive field-loss in the case of a tumour pressing on the chiasma from below, and the field changes in some of the reported cases. (Beginning with the upper outer quadrant, the field-loss is clockwise on the right and anti-clockwise on the left. Recovery occurs in the reverse order.) The chiasma, they point out, is supplied by a rich network of vessels from the internal carotids. At their origin these vessels are firmly fixed to the base of the skull and any sharp movement of the brain and chiasma results in tearing. They stressed the cessation of the blood supply with thrombosis and softening of the nerve tissue.

Osterberg,[3] in 1938, reports 2 further cases and again reviews the history of the theories of the injury. He does not agree with Traquair *et al.* He writes: 'There are no anatomical grounds for supposing that the central portion of the chiasma has its own separate vascular supply; if so, why should the crossed nerve-fibres solely and exclusively be put out of action by a lesion of the chiasmal vessels'? He points out that:

1. It is always a forcible blunt violence from the front, causing a relatively slight fracture not extending to the base, but causing a rupture in the skull-cap leading to a possible distension of the front part of the contents of the skull.
2. It usually occurs in comparatively young men round about 30 years of age, with elastic skulls.

Similarly he discounts Coppez's view of complete tear. He argues that chiasmal rupture does not occur as an intercurrent dissectional finding. One should find it now and then as a lesion in cases of skull injury causing death, whereas the literature can muster some 30 cases (at that time) in which it occurs and life is preserved (Liebrecht's and Koerber's cases are exceptions). Experimentally, in cadavers, he stretched the chiasma by pulling apart the optic nerves with various degrees of force and suddenness. He demonstrated histologically numerous minute rhomboid tears in the median sagittal plane, in serial section seen to be staggered, and so numerous as easily to affect all the crossed fibres. They proved to him that the median plane of the chiasma is its most vulnerable part. When the frontal bone is fractured the anterior part of the contents may be literally distended suddenly and violently. He concluded that the so-called sagittal rupture of the chiasma is in reality multiple minute tears of the crossed fibres.

In 1948 Klein and O'Mallie[4] described a most unusual occurrence. An epileptic male aged 32 fell on his face and the next day had complete loss of vision in the right eye and a marked temporal defect in the left. No fracture was demonstrated. The right disc became quite pale and the retinal vessels attenuated. Six months after the accident there was no change. Then, two months later, the patient reported returning vision in the right eye. At first he could only count fingers, and there was a central scotoma with full peripheral field. The scotoma disappeared and visual acuity in that eye rose to 6/9. The temporal field in the left eye remained defective. A few weeks later, after some slight trauma to the head, vision in the right eye began to deteriorate. A central scotoma re-appeared, peripheral fields began to contract and within a week the patient was again blind in the right eye. At the same time the defect in the left temporal field disappeared and he ended up with a full left field and vision, and a blind right eye (confirmed 3 years later). The pupil in the right eye reacted to direct light from the start. The reaction decreased until, when the optic atrophy had become established, it was not elicited. No definite change was noted during the short recovery. The author is at a loss to explain the extensive return of vision in the face of the fact of established optic atrophy. This, he states, is contrary to all experience. He quotes Traquair as stating that if no improvement occurs within the first 4 weeks after injury, none can be expected. Yet this man showed rapid and almost complete recovery 8 months after the injury. (He discounts a functional explanation on various sound grounds.)

The mechanism here, he suggests, is vessel damage with intraneural haemorrhage. The vessel closes and a slight injury causes it to leak again, 'a mechanism well known in meningeal and brain vessel damage when a minor injury may cause renewed haemorrhage long after the initial trauma'.

Campbell and White,[5] in 1938, described 2 similar

skull fractures with bitemporal hemianopia. In both cases the right macula was spared and one case showed 2 small islands of vision in the right temporal field. The visual acuity was better in the right eye in one case, but in the other in the left eye, i.e. the better vision did not correspond with the macular sparing. They advance the view that the visual loss is due to an intrasellar haematoma, and quote 2 cases by von Wagener in which haematoma of the sella was demonstrated at operation in head injuries accompanied by temporal field loss. They urge that the skull should be opened in such injuries to evacuate the haematoma.

Hughes,[6] in 1943, also describes a case of fracture of the left frontal bone extending into the left middle fossa. The injury resulted in a haematoma which affected the left optic nerve mainly at its junction with the chiasma. There was a loss of 3/4 of the right field (all but the upper inner quadrant) and 1/4 of the left field (upper outer quadrant), so that presumably the injury affected mainly the lower inner fibres of the left optic nerve and the knuckle of crossed fibres from the lower inner portion of the right nerve. Later, in 1945, Hughes [7] was able to inspect the chiasma in the case of a man aged 45 who sustained a fracture of the frontal bone with complete bitemporal field loss. Seven weeks after the injury the anterior fossa was exposed 'in order to repair the dural defect in relation to the right frontal sinus'. The chiasma was well inspected; there was no evidence of gross injury, certainly no suggestion of a sagittal tear.

It seems probable therefore that the mechanism is not a single factor but one or more of several. Complete rupture, except as a very rare occurrence, may be discounted. The theory of Osterberg seems to me to merit acceptance, certainly in those cases which show a clean-cut severance of the crossed fibres. Whether, however, this can occur without any vascular disturbance is doubtful. It is true that a fracture of the frontal bone is demonstrated in most cases, but not in all. One must agree with Osterberg that the crossed fibres of the chiasma surely cannot have their own very special blood supply. It is true that this supply is from small pial vessels without anastomoses, but again one asks: how are the crossed fibres only selected?

Duke-Elder,[8] in assessing various views, appears to accept Traquair's theory.

On the other hand, haematoma of the sella has been demonstrated, behaving like a tumour with pressure signs, and this would account for cases such as those described by Klein and O'Mallie and by Campbell and White.

In the present case one must assume such a pressure-producing haematoma, whether or not there was rupture of the crossed fibres as well. This man shows a clean-cut separation of the crossed fibres, but at one stage he also showed symmetrical contracted fields and epileptic seizures, which point to a haematoma that reached a certain size and then gradually receded and became organized. In this respect it did not act as a tumour of the sellar region usually does, and one wonders whether here the haemorrhage could have been intraneural rather than perineural or intrasellar.

Let us now turn to the crossing of the macular fibres. It has not yet been settled whether the fixation area of the retina is served by fibres which are divided sharply into inner crossed and outer uncrossed or whether by both crossed and uncrossed fibres in that confined area only. Here one may refer to two interesting cases.

Haden,[9] in 1936, described a case of a young girl aged 15 with a craniopharyngioma on whom Cushing operated. In order to remove the cyst, which was causing serious loss of vision, he bisected the chiasma. After this the vision was reported as R 6/12, L 6/6.

In time the patient developed progressive and serious signs of lack of pituitary function and also a deterioration of vision to the extent of R 6/60, L 6/22. Exhibition of pituitary substance resulted in considerable improvement in vision up to R 6/30, L 6/9. There was general improvement as well, but apparently parental interference with the endocrine treatment was a hindrance and the patient eventually died in convulsions. No autopsy was permitted. The author makes 3 points:

1. Accurate observation of the time it takes for the discs to show atrophy in descending degeneration (as opposed to ascending degeneration demonstrated experimentally at the level of the chiasma after optic-nerve injury). The first evidence of atrophy in this case appeared after 14 weeks (but this single observation was challenged as being of little value either scientifically or medico-legally).
2. A clean-cut hemianopia resulted; there was no macular sparing.
3. The effect of pituitary substance on the vision. So long as she took whole pituitary her condition improved and her vision was sustained. When it was stopped the vision deteriorated and deficiency signs returned. He concluded that loss of vision accompanying pituitary tumours is due not alone to the physical pressure but also to diminished secretion of the gland, i.e. he assumes a specific visual function of the pituitary.

Evans and Browder,[10] in 1944, recorded a very similar case, viz. surgical section of the chiasma in a boy of 13 for complete removal of a cyst of Rathke's pouch. The resultant bitemporal hemianopia showed macular sparing on the perimeter with a 2·5/330 test object to the extent of about 10° on both sides. Visual acuity, however, was not above 6/12 on either side. The reason for this depressed vision was not obvious. They argued that if opposite halves of the macula are intact visual acuity should be 6/6. If not, there must be a central scotoma—which they proceeded to demonstrate. The size and shape of any central scotoma affects fixation and fixation movements, and off-centre fixation is necessary. This they also demonstrated. They conclude that each macula is served by both crossed and uncrossed fibres and that this would account for both the sparing of the macula and the depressed visual acuity after median section.

These 2 cases are highly illustrative. Presumably the surgeon's knife is sharp enough and his hand steady enough to make a section in the mid-line accurately enough to preserve binocular functions. If, however, we bear in mind, slight anatomical variations which may bring about a crossing to one or other side of dead centre, then this would account for the apparent sparing of the macula in some cases and not in others. It is significant that the visual acuity is not necessarily better on the side of the spared macula. In the present case the macula on the R side is consistently spared in

all the perimeter tracings. (In the central field charts, to 3/1000 white object, the R fixation point appears bisected and the L fixation point is obliterated, i.e. included in the field loss). The right was the more myopic eye, but corrected vision was 6/12 reading a whole test line. The left eye corrected gave 6/12, but always only the R half of the line with the head and eye kept steady. There was no patent reason why visual acuity should not be better. These observations would seem to lend substance to the view of Evans and Browder that the macula, or more probably the fovea, is served by both crossed and uncrossed fibres and that interruption of the crossed fibres only would give full foveal fields but reduce the acuity.

Incidentally, Wernicke's classic hemianopic pupillary sign is not constant in the reported cases. Some have demonstrated it, others not. No reason has been advanced. It may be that the method was not uniform. In this case it was demonstrated but not consistently. It is not a reliable clinical sign.

CONCLUSIONS

So far as this case bears out observations made by previous writers one may conclude that:

1. The optic chiasma may be injured in violence to the head in such a way as to produce the equivalent of a sagittal section of the chiasma.
2. Fracture of the skull is usual but not invariable in such cases, but bony displacement does not directly cause the injury.
3. The proximate cause is multiple minute tears of the crossed fibres, and not macroscopic severance.
4. Haematoma formation may complicate the fracture and assist in the visual deterioration.
5. The fibres from each macular area of the retina are intermingled crossed and uncrossed and a clean section would lead to 'sparing' of both maculae with depressed visual acuity.

SUMMARY

1. A case is described of skull fracture in which the optic chiasma is severed functionally in a sagittal plane.
2. The literature is reviewed and the mechanism of the injury discussed.
3. The macular fibres and their decussation are discussed.

REFERENCES

1. Traquair, H. M., Dott, N. M. and Russell, W. R. (1935): Brain, **58**, 398.
2. Coppez, H. (1929): Arch. Ophtal., **46**, 705.
3. Osterberg, G. (1938): Acta ophthal., **16**, 466.
4. Klein, R and O'Mallie, P. P. (1948): Brit. Med. J. **I**, 880.
5. Campbell, E. H. Jnr. and White E. (1938): N.Y. St. J. Med., **38**, 841.
6. Hughes, E. B. C. (1943): Brit. J. Ophthal., **27**, 367.
7. *Idem.* (1945): *Ibid.*, **29**, 629.
8. Duke-Elder, W. S. (1949): *Text-book of Ophthalmology*, Vol. IV, p. 3565. London: H. Kimpton.
9. Haden, H. C. (1936): Trans. Amer. Ophthal. Soc., **34**, 208.
10. Evans, J. N. and Browder, J. (1944): Arch. Ophthal., **31**, 43.

MEETING OF THE FEDERAL COUNCIL*

The first meeting of the newly-elected Federal Council of the Association was held in Pretoria on 28, 29 and 30 October 1954. Fifty-one members attended. The Council was in session about twenty hours.

Dr. A. W. Sichel was elected as Chairman of Federal Council, Dr. J. H. Struthers as Vice-Chairman and Dr. A. H. Tonkin as Secretary. In accepting office Dr. Sichel expressed his deepest thanks for the continued confidence of his colleagues after the 9 years during which he had presided over Federal Council.

Dr. J. H. Struthers was elected as Vice-President and President-elect of the Association, and Dr. J. S. du Toit as Honorary Treasurer. Dr. du Toit in accepting office mentioned that he had served the Association in a financial capacity for 30 years.

Executive Committee. In addition to the *ex officio* members, viz. Drs. Lane, Pirie, Sichel, Struthers and du Toit, the following members were elected to the Executive Committee: Drs. H. Grant-Whyte, M. Cole Rous, R. Schaffer, M. Shapiro and R. Theron.

Ethical Committee. The following were elected: Drs. A Broomberg, A. I. Goldberg, F. W. F. Purcell, T. Schneider and J. H. Sypkins.

Central Contract Committee. After discussion it was decided that this committee should comprise 3 members from the Southern Transvaal Branch, 2 each from the Northern Transvaal and East Rand Branches, and 1 each from any other branches represented. The members elected were Drs. W. Chapman, G. T. du Toit and L. O. Vercueil (Southern Transvaal), J. G. A. du Toit and F. Ziady (Northern Transvaal), M. Segal and J. Q. Ochse (East Rand), L. L. Alexander (Border), M. A. Robertson (Cape Midlands), J. A. Currie (Cape Western), J. P. Collins (Griqualand West), A. Broomberg (Natal Coastal), B. A. Armitage (Natal Inland), J. S. Visser (Orange Free State) and H. C. Paradisgarten (South West Africa).

Parliamentary Committee. It was agreed that this committee should consist of the Executive Committee members of the Transvaal and the Federal Council members of the Northern Transvaal Branch.

FINANCIAL REPORT

The Honorary Treasurer (Dr. J. S. du Toit) reported that the first 9 months of this year's working of the affairs of the Association (to 30 September) had ended with a substantial credit balance. This was largely the result of the increased advertisement revenue of the *South African Medical Journal*, though it was expected that there would be a loss of £400 on the *South African Journal of Clinical Science* by the end of the year. The cost of carrying out the questionnaire regarding specialist registration was £252.

In the discussion, it was mentioned that the Southern Transvaal Branch had an adverse balance of £500 and the Natal Coastal Branch was in a bad financial position. Criticism was levelled at the increase in the Head Office capitation fee (£1 11s. 0d. to £2 2s. 0d.), which was made at the beginning of 1953, and at the use of a cheaper paper in the *Journal* than that used in former years. The financial report was adopted.

Benevolent Fund. Two legacies, each amounting to £500, have been paid to the Fund from the estates of the late Dr. A. Frew and the late Dr. A. N. Pollock; also £1,400, the proceeds of a mannequin parade organized for the Southern Transvaal Branch. The Branch was heartily thanked for this gift, and special reference was made to the work done by Mrs. Wolfowitz and Mrs. van der Merwe. Up to 31 August *in memoriam* cards had brought in £125, acknowledgements for services rendered £185, and donations £317. An appeal is made to all members to support their Benevolent Fund.

* This report is not to be taken as minutes (which will be published later), nor are the resolutions necessarily recorded verbatim.

SPECIALIST REGISTRATION

The results of the recent poll of the profession were before the meeting and also a letter from the South African Medical and Dental Council asking for the views of Federal Council on the interpretation of the results of the poll and on what steps should now be taken. Varying views were expressed by members on the interpretation of the results, and on the procedure which the meeting should follow. A resolution was passed rescinding all previous resolutions on the subject, and after much debate it was resolved to ask the scrutineers to analyse the voting according to whether the voters were registered specialists or not, and according to whether they were in town or country practice. It was also decided to hold the next meeting of Federal Council shortly before the Medical Council meeting in March 1955.

The Special Committee on Registration of Specialists was discharged with a hearty vote of thanks, especially to Dr. Schneider, the convener.

ASSOCIATION OFFICIAL IN TRANSVAAL

On consideration of the report of the Head Office and Journal Committee the view was expressed by several members that the amount of Association work accruing in the Transvaal branches was so great that a full-time senior Association official ought to be stationed in the Transvaal to handle it and to work with the Association committees that meet in the Transvaal. Contract practice was particularly mentioned as needing attention by the proposed official. Debate ensued, and reference was made to the report of Dr. Marchand, Associate Secretary, upon the investigations he made during his visit to the Transvaal in August 1954. The Chairman said he was satisfied that an Association official was needed in the Transvaal, but that it was important not to deplete the Head Office staff at Cape Town.

It was finally resolved (1) that Federal Council appoint a permanent full-time official in the Transvaal to deal with Association affairs, including Contract Practice, and (2) that the Head Office and Journal Committee be instructed to work out the details and report to the Executive Committee, which was given power to act.

On the report of the Head Office and Journal Committee it was also resolved to authorize members undertaking Committee work on behalf of Federal Council to obtain such clerical assistance as might be necessary from time to time, at the expense of the Council, subject to the approval of the Executive Committee.

LOCALE OF HEAD OFFICE

The Head Office and Journal Committee reported that it had submitted a memorandum to Branches setting out its views on this matter and also a memorandum of the Southern Transvaal Branch (approved by the Northern Transvaal Branch) setting out points in favour of the transfer of Head Office to that Province. Branches had been asked to submit their views; but up to the time of the meeting replies had been received only from the Border, Cape Western, Griqualand West, Natal Inland, and Orange Free State and Basutoland Branches, which were in favour of Cape Town as the locale (the O.F.S. Branch adding that if a transfer is to be made they would prefer Bloemfontein as the locale); and from the Natal Coastal Branch which in principle approved the transfer to the Transvaal, and expressed the opinion that the control of contract practice should be moved to Johannesburg at once.

In the course of the debate divergent views on the proposed transfer were expressed, but there was general agreement that, in view of the decision taken at this meeting to station an Association official in the Transvaal for Association business, and the opinions of Branches received, it was not appropriate to proceed further with the question of transfer of Head Office; the 'previous question' was accordingly moved and carried.

BENEFIT SOCIETY PRACTICE

A great deal of debate took place on this subject, particularly with reference to the Mines Benefit Society and the Vanderbijlpark Medical Benefit Fund. Great dissatisfaction with the present position was expressed. The Association's policy in favour of an open panel of doctors and against the appointment of full-time medical officers had been rejected by the Vanderbijlpark Society. At Blyvooruitzicht the Mines Benefit Society had made another full-time appointment. The debate was based on the following resolution proposed by Mr. J. Wolfowitz and seconded by Dr. M. Peskin, which was eventually passed:

"That in the opinion of Federal Council the time has come to review the whole question of the provision of medical services to industry in general. To this end it resolves to take the initiative in calling a conference at the highest level at which representatives of the Medical Association, leaders of industry and other interested parties can discuss the problems which arise when medical services are provided by contract to employees. That an *ad hoc* committee assisted by legal and actuarial experts be appointed to make preliminary enquiries as to the possibility of calling such a conference and if necessary to convene it. The necessity for the continuation of the vigilence committee will thus no longer exist."

Reference was made in the debate to the great expansion of benefit societies, which was seriously affecting the pattern of medical practice. It was felt that through lack of definite policy and isolated action on various occasions the Association was not making itself effectively felt. The time had come when a renewed effort should be made; a definite though elastic policy should be devised and adopted, and co-operation sought at a high level with those responsible for benefit-society policy. If this effort failed the Association might have to consider more drastic steps. Dr. Vercueil referred to the successful results of negotiations with the Railways and Harbours Sick Fund. Most speakers were against the closed panel and the full-time appointment. Several laid stress on the need to determine the Association's policy, including its financial aspect, before meeting benefit-society representatives; otherwise, they said, the Association's representatives were in no position to negotiate successfully.

After the resolution was passed, it was decided that the new Committee should meet at Johannesburg, and consist of the following 8 members: Drs. M. Shapiro (convener), Agranat, Wolfowitz, Peskin, Vercueil, J. G. A. du Toit, Ochse and Ziady.

In discharging the Vigilance Committee, the Council accorded a vote of thanks to the Chairman (Dr. Agranat) and other members.

Mines Benefit Society. Dr. Vecueil reported that 2 members of the Mines Benefit Society Medical Officers' Executive would in future attend meetings of the Mines Benefit Society Committee, and would thus have an opportunity of influencing decisions.

The meeting disapproved of an arrangement whereby the Mines Benefit Society offered to pay £5 to any doctor undertaking a confinement of a beneficiary of the Society, provided his fee (including pre- and post-natal attendance) did not exceed £10.

Anaesthetists' Fees, South African Railways and Harbours Sick Fund. A complaint of inadequate salaries was referred for report to the Anaesthetists' Group.

MEDICAL AID SOCIETIES

National Medical Aid Society of South Africa. On the report of the Central Committee for Contract Practice the resolutions concerning this society taken at the last meeting of Federal Council were rescinded: Grave fears of abuse were expressed by several speakers, who reported cases in which well-to-do persons were obtaining medical aid terms through this society. A motion to withdraw recognition was proposed but not passed, and a resolution was passed laying down the following conditions for continued recognition of the society:

1. The average income of the members of the Medical Aid Society should not exceed £700 p.a.
2. The income of no member of the Society should exceed £2,500 p.a.
3. Only 3% of the members of the Society should have incomes within the range of £1,500–£2,500 p.a.
4. In assessing the income of any member, the Society should be assured that the wife's income is also taken into account. Therefore, the income assessed should be the combined income of husband and wife.
5. That membership of the Society be restricted to wage and salary earners and their families. (Some of the foregoing conditions are dealt with in proposals concerning basic-income limits which the Society has recently transmitted to the Association.)

Federal Council also passed the following conditions for continued recognition of the Society:

That associate membership should be abolished.

That amendments of its Constitution affecting medical services should be transmitted to the Association for consideration.

That a check be made with regard to the average income figure of £700 and the method by which it is calculated (this to be done annually by the Associate Secretary with the assistance of the Association's Accountant).

Medical Aid Societies generally. Two *new Medical Aid Societies* were approved, viz. The A.T.I. Medical Aid Society (for 1 year) and the Bloemfontein Municipal Employees' Medical Aid Society.

Two Benefit Societies were approved as Medical Aid Societies *for specialist services only*, viz. the Jagersfontein Mine Benefit Society, and (conditionally) the Simmer Pan Medical Benefit Society.

The following clauses were added to the Rules *re* Medical Aid Societies:

'That except by resolution of Federal Council no Group or Organization be recognized as a Medical Aid Society which is not confined to a single Unit such as a Firm, Company or similar body. Should such a Firm, Company, etc. wish to incorporate any Group of people or any individual(s) not directly employed by such Firm, Company or similar body into the Medical Aid Society, permission for such incorporation must be obtained from the Medical Association of South Africa.

That the Association has the right to review the Constitution of any Medical Aid Society from time to time as it deems fit, and that it be a condition of approval that all Medical Aid Societies shall at any time furnish any information required.'

Fees. It was decided that the fees for normal cases of multiple birth should be the same as for normal confinements. It was also decided that, ENT fees for general practitioners should be two-thirds of those for specialists, provided that there shall be no reduction on fees of 8 guineas or under and that no fee is to be reduced to less than 8 guineas.

Certain tariff fees submitted by the Radiological Group were adopted.

Membership Figures. The Central Committee for Contract Practice reported that, of the 136 Medical Aid Societies listed, 133 were in operation, and that information has been received from all but 13, from which the following membership figures had been compiled.

	Members		*Dependents*
	106,875		120,114
Police (E)	10,000	(estimated)	20,000
(non-E)	11,000		
Prisons Dept. (E) ..	2,500	(approx.)	10,000
(non-E) ..	1,000		
	131,375		150,114

Grand Total: 281,489

Treatment of Government Cases. The Parliamentary Committee reported that the agreement that medical services rendered by private practitioners to patients for whom the Government is responsible should be paid for on the Medical Aid Tariff, subject to certain discounts, has now been extended to other departments beside the Police, viz. Education (industrial schools, etc.), Defence Force, Pensions, Health (leper institutions, work colonies, etc.), Prisons (staff). The only outstanding agreement is for prison inmates: this is still under negotiation. The discount is 15% on fees over 25 guineas and 10% on smaller amounts. A request has been made for full payment of fees less than 2 guineas, and this matter is under discussion. Another question under discussion is the practice of the departments to reckon the discount on the total of monthly accounts and not on individual items. The Association has informed part-time District Surgeons that it will support them if they will apply to the Secretary for Health to come under this tariff. The Commissioner of Pensions deals only with doctors on his panel and has declined to accept the services of other doctors.

The Council tendered its thanks to the Parliamentary Committee and Dr. Struthers, the chairman, for their successful efforts in this direction.

Medical Treatment of Colonial Service Pensioners. It was agreed to extend the privileges (of Medical Aid Societies rates) enjoyed by pensioners of the High Commission territories to other Colonial Service pensioners who were re-employed for 2 years or more in the High Commission territories and were permanently resident in the Union, subject to a suitable guarantee regarding payment of fees.

Opticians and Medical Aid Societies. The South African Optical Association has approached certain Medical Aid Societies with an offer to supply refraction services to their members. The matter came up on representations from the Ophthalmological Group and the Cape Western, the Natal Inland and the Northern and Southern Transvaal Branches of the Association. It was pointed out that the optometrists would be entering into direct competition with ophthalmologists, who have hitherto rendered comprehensive services within their speciality. After discussion it was resolved that the Association would not agree to contracts between Medical Aid Societies and unregistered auxiliaries.

WORKMEN'S COMPENSATION CASES

The Workmen's Compensation Act Committee reported an offer from the Commissioner after many years of negotiation for the improvement of the W.C.A. tariff of fees, viz. an all-round 25% increase to take effect on 1 January 1955, with the condition that no further proposals for increase would be considered for 3 years. The increase would involve an additional payment in fees of about £100,000 a year. It was submitted by the Committee as a reasonable compromise, not as a final settlement. After debate, in which some members expressed the view that the proposal was unsatisfactory, the offer was accepted, but the Council did not bind itself to wait 3 years before making further representations. Dr. E. Meltzer (Chairman of Committee, now not a member of Federal Council) and Mr. H. Lewis, Workmen's Compensation Commissioner, attended and spoke during the discussion of this matter, and received the thanks of the meeting. Drs. G. T. du Toit, Segal and Verceuil, were appointed as members of the new W.C.A. Committee, with power to co-opt.

SECRETARY FOR HEALTH

Scheduled Drugs. Dr. J. du Pré le Roux, Secretary for Health, attended. In discussion he confirmed that doctors who dispensed medicines were required to keep a register of certain scheduled drugs and also a prescription book. In reply to the observation that in some diseases, e.g. epilepsy, it might be dangerous if repeat prescriptions of drugs in Schedule VI were not obtained. Dr. le Roux pointed out that a doctor could give a prescription covering a considerable time (e.g. once a month for 6 months). It was mentioned that patients from the country sometimes had to travel 100 miles to get a comparatively harmless drug repeated; Dr. le Roux replied that in such a case the doctor could himself instruct the patient's local chemist to repeat the prescription. The question of the emergency use of drugs such as morphine in nursing homes was raised and Dr. le Roux repeated the suggestion that the individual doctor or one doctor for the whole nursing home should make himself responsible for a store of such drugs in the nursing home.

Part-time District Surgeons. This subject was also discussed while Dr. le Roux was present, and he said that if specific information were supplied the matter would be dealt with sympathetically. Later in the meeting the District Surgeons' Group was asked to submit a memorandum for consideration by the Parliamentary Committee.

Articles in Journals of Societies of Medical Auxiliaries. It was decided that it was unethical for medical practitioners to contribute signed articles to journals of groups of unregistered practitioners. This was in accordance with a decision of the South African Medical and Dental Council. The question arose out of the publication of an article by a medical practitioner in the *South African Refractionist*.

Income Tax Deductions in respect of Postgraduate Study Expenses. The Secretary reported replies showing the position in certain countries, and it was decided to ask the World Medical Association to conduct a survey amongst member associations and to make a recommendation on the subject.

Shortage of Nurses. The Griqualand West Branch had asked Federal Council to give attention to this matter, which had been raised in Dr. J. H. Kretzmar's presidentail address to the Branch (*Journal* of 1 May 1954, p. 382). Considerable debate took place in which divergent views were expressed, and the motion to ask the Minister to institute an enquiry into the subject was lost.

Nurses and Emergency Anaesthetics. The Association's members on the Committee for Liaison with the South African Nursing Association reported on the Committee's discussion on this subject arising out of the resolutions of the last Federal Council and the letter from the Secretary of the Nursing Association (see *Journal* of 4 September 1954, p. 775). On the recommendation of the Committee the disputed resolutions were altered to the following:

1. That under conditions of emergency *and when no other doctor is available*, it must be clear that it is the duty of a nurse *or midwife* to carry out any *lawful* instructions including the administration of anaesthetics, given by the doctor, under his responsibility.

2. That Council does not approve of any formal training in anaesthesia for nurses *and midwives* other than such as is at present given, namely gas-air analgesia.

National General Practitioners' Group. The Executive Committee by a majority had not agreed to certain clauses in the proposed revised constitution of the Group (see *Journal* of 12 June 1954, p. 504, and 17 July 1954, p. 617). After debate the Council approved of the constitution, subject to the amendments of clause IV (6) so as to read, 'The general control and direction of the policy and affairs of the Group shall be vested in the National Committee or its Executive Committee'.

Submission of Fee Schedules to South African Medical and Dental Council. At the last meeting of the Council it was ruled that schedules of fees submitted by Groups must be submitted to Federal Council for consideration before being sent to the Medical Council. It was now ruled that this ruling did not apply to Branches.

College of Physicians and Surgeons of South Africa. A further loan up to £1,000 was authorized towards the expenses of the establishment of the College pending the time when the College would be in a position to use the considerable funds in its possession.

Resolutions from 39th South African Medical Congress. The resolutions of the Plenary Session and of the Public Health Section of the Congress at Port Elizabeth, reported in the *Journal* of 21 August 1954 (p. 704) and 16 October 1954 (p. 900) were adopted. The following resolution passed by the Hospital Administrators' Group at the Congress was also adopted:

'This, the 39th South African Medical Congress, deplores the lack of accommodation for certifiable mental cases, often necessitating the detention of such patients in gaol. The Union Government is urged to provide adequate accommodation for mental cases as a matter of high priority and, in order that public general hospitals can be placed in a better position to assist the Department of Health in dealing with cases suitable for treatment in a general hospital, it is recommended that the Mental Disorders Act be amended and general hospitals be classed as institutions which may legally detain mentally disordered patients'.

Council resolved to send these Congress resolutions to the appropriate Government Department.

Pathological Institutes. On discussion of the question of unfair competition with private pathologists the Pathologists' Group were asked to submit their difficulties to the Executive Committee for consideration.

Ethical Standards. It was decided to print and circulate an Afrikaans version of the *Guide to the Maintenance of Ethical Standards.*

Rehabilitation. A letter had been received from the Department of Labour to the effect that the Minister was appointing a South African Council of Rehabilitation consisting of 13 members, viz. the Secretary of Labour as Chairman, and representatives of the Medical Association, the national associations for the Blind, Deaf, Cripples, Mental Health and Tuberculosis, the Departments of Health and Social Welfare and the 4 Provincial Administrations. The Association was asked to submit 3 names; Drs. Cyril Adler, G. T. du Toit and M. G. Woolff were elected.

Life Members. The Byelaws were amended to provide that 'Members who have served the Association continuously for at least 45 years shall become Life Members' and shall not be liable for the payment of annual subscriptions.

Honours. The Association's bronze medal was awarded to Dr. L. R. Broster, *O.B.E.*, M.A., D.M., M.Ch. (Oxon.), F.R.C.S. and Dr. Hamilton W. Dyke, M.B., CH.B. (Glasg.) was elected as an Emeritus Member of the Association.

Hospital Services. The Chairman reported that a new Draft Hospital Ordinance (Cape) was in course of preparation, and that the Association would be consulted.

It was reported that the Commission of Enquiry into Hospital Matters in the Transvaal would shortly issue a questionnaire, and that members wishing to express their views should communicate with the Augmented Executive Committee.

South African Medical Congress. On the invitation of the respective Branches it was decided to hold a Congress at Pretoria on 17–22 October 1955 and at Durban in 1956. At Pretoria the official centenary celebrations of the city are to start on 21 October 1955. It is anticipated that there will be sufficient hotel accommodation provided early application is made.

Part-time Appointments in Schools. Federal Council expressed the opinion that it is undesirable for specialists to hold part-time appointments as school medical officer; or for any practitioner in practice to hold a part-time appointment to a private nursery school.

Insurance against Criminal Charges. A discussion took place on the desirability of insurance policies being made available for this purpose and Dr. Tonkin was asked to draw up a memorandum for consideration by the Executive Committee.

British Commonwealth Medical Conference. It was decided that the Association should be represented at this Conference, which is to be held at Toronto, Canada, on 20–24 June 1955. Dr. Tonkin was appointed as the Association's delegate.

Australian Medical Congress, Sydney, N.S.W. No representative was appointed, but the Council will be glad to hear of any member who will be in Australia at 19–27 August 1955, which is the date of the Congress.

World Medical Association. Several matters referred to or by the World Medical Association were dealt with. On consideration of a proposed addition to the International Code of Ethics, containing the following clause in the 'list of the duties of doctors to society':

> 'any action, which has no political character tending to preserve the community from any scourge to which it is exposed, should obtain the active support of the medical group'

it was resolved that the word 'political' should be replaced by the phrase 'party political, sectional political or ideological political'.

ANNUAL GENERAL MEETING OF THE ASSOCIATION

The Annual General Meeting of the Medical Association of South Africa was held in Pretoria on the morning of 28 October 1954. The outgoing President of the Association, Dr. J. P. Collins, took the chair, and 47 members attended; there were 10 proxies.

The minutes of the previous annual general meeting, the annual report for 1953 of the Chairman of Federal Council, Dr. A. W. S. Sichel, as published in the *Journal* of 24 July 1954 (p. 639), and the audited financial statement and balance sheet for 1953 of the Association and the Benevolent Fund as published in the *Journal* of 10 April 1954 (p. 318), were adopted. In submitting the accounts the Hon. Treasurer, Dr. J. S. du Toit, observed that on the year's working of the Association there was a deficit of £93 and that at the end of the year the accumulated funds amounted to £27,203. The grants paid out of the Benevolent Fund amounted to £2,237, and the accumulated funds were £38,002. The Auditors, Messrs Gurney, Notcutt and Fisher, were re-elected.

Dr. Collins then inducted the new President, Dr. L. E. Lane, who, he said, had been nominated to this high honour by his own colleagues, and whose helpful, considerate and inspiring support at the Medical Congress at Port Elizabeth made his task as Congress President a pleasant experience instead of an onerous task. Dr. Collins on retiring from the presidency of the Association

expressed his thanks for the honour done to him on behalf of the City of Kimberley and the Griqualand West Branch as well as his wife and himself.

Dr. Sichel in proposing a vote of thanks to Dr. Collins expressed appreciation of the valuable work which for many years he had done for the Association, and spoke appreciatively of the efficiency and dignity with which he had carried out his office.

Dr. Lane, on taking the Chair, said that he was profoundly affected by the honour conferred on him. The meeting was then adjourned until the evening.

ADJOURNED MEETING

At the adjourned Annual General Meeting, which was held at 8 p.m. on the same day, Dr. N. L. Murray, as President of the Northern Transvaal Branch, took the chair and cordially welcomed the delegates and guests present. He mentioned that this was the first meeting of the Federal Council held in Pretoria (except during Medical Congresses), and said that the members of his Branch looked forward to welcoming their colleagues next year, when the Medical Congress would be held there.

Dr. H. Muller, Mayor of Pretoria, extended a welcome to the guests in both English and Afrikaans, stating that it was a great pleasure for him to do so. He said that it was always a pleasure to be associated with the medical profession, for whom the public had great respect. It was also a pleasure to be associated with the profession through Pretoria's Medical School, towards whose establishment the City Council had been proud to make a contribution. He welcomed the idea of a Medical Congress in Pretoria during the Centenary year. In conclusion he expressed the hope that the Federal Council meeting would be a very successful one and that those coming from other centres would take back pleasant memories of their stay in Pretoria.

Dr. Lane then resumed the Chair as President and called on Dr. Sichel, who, in thanking the Mayor on behalf of Federal Council, said that the delegates appreciated very much being in Pretoria and that, speaking for himself, he had attended 3 annual medical congresses there and was looking forward to the renewed pleasure next year.

The President then on the request of Dr. Tonkin presented a miniature of the presidential badge to Dr. Collins, the outgoing President. He also invested Mrs. Lane with the badge of office of President's Lady.

Dr. L. O. Vercueil, President of the Southern Transvaal Branch, proposed a vote of thanks to the Northern Transvaal Branch for their hospitality.

Dr. Lane then delivered his Presidential Address (see *Journal* of 30 October 1954, p. 921), after which the members and guests were entertained by the Northern Transvaal Branch.

PASSING EVENTS : IN DIE VERBYGAAN

Union Department of Health Bulletin. Report for the 7 days ended 28 October 1954:

Plague: Nil.

Smallpox. Transvaal: One (1) Native case in the Vanderbijl Park Municipal area.

Typhus Fever. Cape Province: One (1) Native case in the Zwelitsha Township in the King William's Town district. One (1) Native case in the Enyanisweni location in Qumbu district. One (1) Native case in the Queenstown municipal area. Three (3) Native cases at Askeaton in the Xalanga district.

The diagnosis of all the above cases has been confirmed by laboratory tests.

Epidemic Diseases in other Countries:

Plague: Nil.

Cholera in Calcutta (India).

Smallpox in Bombay, Calcutta, Madras (India); Basra (Iraq); Dacca (Pakistan); Moulmein (Burma); Phnom-Penh (Cambodia); Phanthiet, Saigon-Cholon (Viet-Nam).

Typhus Fever: Nil.

* * *

Lede word daaraan herinner dat die Vereniging 'n ooreenkoms met die Atlas Versekeringsmaatskappy het waarvolgens hulle versekering kan aangaan wat hulle dek teen eise deur derde partye of wat uit hul praktyke voortspruit.

Volgens ooreenkoms met die Federale Raad bevat die polis spesiale bepalings wat alleenlik op lede van die Vereniging van toepassing is, en wat deur geen ander maatskappy aangebied kan word nie.

Navrae kan aan die kantoor van die Vereniging (Posbus 643, Kaapstad), of aan enige kantoor van die Atlas Versekeringsmaatskappy gerig word.

REVIEWS OF BOOKS : BOEKRESENSIES

SURGICAL PROGRESS

British Surgical Practice: Surgical Progress 1953. Edited by Sir Ernest Rock Carling, LL.D., F.R.C.S., F.R.C.P., F.F.R. and Sir James Paterson Ross, K.C.V.O., M.S., F.R.C.S. (Pp. 376+vii, with 145 illustrations.) London: Butterworth & Co. (Publishers) Limited. South African office: Butterworth & Co. (Africa) Limited. 1954.

Contents. Part I. Original Articles. 1 Arterial Grafting. 2. Post-Operative Brachial Plexus Paralysis. 3. The Syndrome of the Carotid Sinus. 4. The Treatment of Carcinoma of the Colon. 5. Chronic Constrictive Pericarditis. 6. Fluid and Electrolyte Balance. 7. Surgical Aspects of Meningitis. 8. Cardiospasm. 9. Fractures of the Pelvis. 10. Portal Hypertension. 11. Retinal Detachment: Improvements in Investigation and Treatment. *Part II. Critical Surveys.* 12. Biological Decortication (Enzyme Debridement). 13. The Surgery of Corneal Grafts. 14. The Chemotherapy of Malignant Diseases. *Part III. Abstracts.* 15. Actinomycosis—Vascular Surgery, Noter-Up, 1953. Index.

Here is an excellent volume which can be strongly recommended to all practitioners interested in surgery.

The production is on the same lavish scale as its predecessors, with profuse illustrations, lengthy lists of references and a comprehensive index.

The first section contains 11 articles, each written by an undisputed authority on the particular subject. These chapters consequently form up-to-date surveys based on the experiences of the authors. It is difficult to single out specific features, but mention must be made of the account of arterial grafting by Prof. C. G. Rob, which should be read by everyone who deals with arterial disease. It contains detailed descriptions of the indications for grafting and the taking, storing and preparation of the grafts, and a good description of the operation of arterial grafting. Similarly, the chapters on Portal Hypertension and Fluid and Electrolyte Balance are models of their kind.

The second part consists of 3 critical surveys, which are well done and will save the reader much time and trouble by presenting 'pre-digested' information—so valuable these days with the extensive medical literature making it impossible to remain fully informed on all subjects.

The third section consists of about 50 pages of short selected abstracts from the literature, which serves to bring the original chapters in British Surgical Practice up to date. Here again it will save the reader a great deal of time by presenting the information in a readily available form.

Small defects there are in this volume, but they are evidence only of the need for urgent publication and should not in the least detract from the undoubted importance and value of the book—a great asset on anyone's bookshelf and a 'must' for all surgeons.

D. J. du P.

MEDICAL HISTORY FOR THE LAYMAN

Pomp and Pestilence. By Ronald Hare, M.D. (Pp. 224. 12/6.) London: Victor Gollancz Ltd. 1954.

Contents: 1. Parasites and Parasitism. 2. Man and his Parasites. 3. Parasites and Pestilence. 4. Miasmas or Microbes. 5. The Reaction of the Community. 6. The Reaction of the Individual. 7. Parasites and Populations. Notes and References. Index.

Popular books on medical subjects are not always endurable to members of the profession, but this one of Professor Hare's is a distinguished exception. His history of infectious diseas extends, in 224 pages, from about 200 million B.C. to the present day. It deals with the infections of extinct animals and prehistoric man as well as with the numerous plagues of recorded history, and includes such diverting subjects as the origin of bacterial warfare, the antiquity of the coccus, and the construction of Roman lavatories.

There is also the incident—one hopes not a typical one—in which the Venetian physicians deserted the city during the Black Death, leaving the surgeons to attend the sick. Perhaps they merely realized their limitations.

Professor Hare has read widely and writes with an agreeable sense of irony. His title is perhaps the only unsatisfactory feature of a most entertaining and civilized book.

P.B.

CORRESPONDENCE : BRIEWERUBRIEK

DIABETES AND PREGNANCY

To the Editor: In the 30 October issue of this *Journal* (p. 925), an editorial, on a most fascinating topic concerning which there is a good deal of recent evidence, appeared under the above heading.

We were greatly pleased to read it but were most disappointed that no mention was made of the pioneer work being done in this country, and in our Mother City in particular. Some of this was reported by Dr. W. P. U. Jackson as recently as the 1954 Congress at Port Elizabeth.

Most of the contents of the editorial expresses views and ideas which have been formulated and published by Dr. Jackson and publicly discussed prior to the quoted article.

John F. Brock
Medical School *Professor of Medicine, University of Cape Town*
Mowbray James T. Louw
Cape Province *Professor of Obstetrics and Gynaecology, U.C.T.*
2 November 1954

Jackson, W. P. U. (1952): Brit. Med. J., **2**, 690.
Idem (1953): S. Afr. Med. J., **27**, 795.
Idem (1954): J. Clin. Endocr., **14**, 177.

PRACTITIONERS' NAMES ON ENVELOPES

To the Editor: I was pleased to read Dr. McMurray's letter[1] in your issue of 23 October, Tempora mutantur, et nos mutamus in illis! Certain ideas of 'Victorian' England still persisting in S. Africa must of necessity be changed to modern ones. (I was amused listening yesterday to the broadcast 'Young Ideas' debating the reason for celebrating Guy Fawkes' Day in S. Africa. The team opposing the celebration won!)

In the good old days of an insular mentality the title 'Dr.' signified a medico. Strangely enough its use was permitted on the name plate, displayed publicly, but prohibited from use on a private communication. Our post office regulations state that the full name and address of the sender should be on the back of the envelope. (See the official 'registered' envelope.)

Consult a dictionary if in doubt about the meaning of the word 'advertisement'. Learn that it means: 'Printed notice in a newspaper or public place'. It certainly cannot be applied to having one's title, name and address on the back of an envelope, which is for the information of the Post Office. Or does a registered medical practitioner form the exception when compelled to refuse Post Office regulations?

Who will suggest that I am advertising (and to whom I pray?) if, when writing to a colleague, relative or personal friend, even to a patient, my name appears on the back of the envelope with my title and address? While the title 'Dr.' does not mean only a medico it also seems amusing that a surgeon calling himself 'Mr.' cannot fall under the regulation now debated. Of course even we doctors, and old ones at that, are not infallible. Errare humanum est! It also applies to officials promulgating regulations, who simply incorporate old existing rules. It is on the same level as when a new textbook takes over some antiquated and discredited sentences from old books.

The ethical rules of the 'International Medical Association' are prominently displayed in our 'Medical House'. It should be noted that they were framed and presented by a prominent member of the profession, a respected member of the Federal and also Medical Council. There is no mention of any such ethical rule in the International Code as now debated by Dr. McMurray and the writer, who prefers to remain anonymous.

Pax Vobiscum

Johannesburg
26 October 1954

1. McMurray, T. B., S. Afr. Med. J., **28**, 920.

PRICE OF BOOKS

To the Editor: 'Curious and Dissatisfied' complained in his letter published in the *Journal* on 23 October about apparent discrepancies between prices of medical books listed in a British bookseller's catalogue and those charged by South African booksellers. He quoted as an example an unspecified title selling locally at 115s., whilst the price quoted in the overseas catalogue, including postage and insurance, is only 80s.

I appreciate your correspondent's feelings but he may not have investigated the matter sufficiently.

If the overseas price, including postage and insurance, amounts to 80s. the net published price should be about 75s. (overseas Booksellers add about 5% for transport charges). This type of book would normally be sold by the South African booksellers from between 85s. 6d. and 90s.

Surely this very small advance is reasonable, allowing for the fact that the South African bookseller has to bear far greater risks and expenses stocking a 'perishable commodity' such as a medical book 6,000 miles from the country of origin. His London colleague can, by a mere telephone call, draw on the publishers' stocks at a moment's notice and without undue risk to his capital.

The only explanation of the considerable discrepancy mentioned by your correspondent is the following: A certain major firm of American Medical publishers have subsidized sales of their books in Britain only at not less than 30% below the rates in the U.S.A. This concession is confined to sales in the British Isles only and no British bookseller may pass it on to export orders. In the catalogue received by your correspondent, probably mainly produced for the British domestic market, the titles of this particular publisher would be shown only at the domestic rate which would not have been available to him outside the British Isles.

A further point made by your correspondent is that books published both in Britain and in the U.S.A. should not be imported from the more expensive source. As a rule, South African booksellers buy in the cheapest markets and pass these benefits on to their clients. Circumstances sometimes arise which do not make this advisable. Often the British edition is only published considerably after the American one, sometimes as much as a year later. Some of our medical clients prefer having the original edition available earlier, even at a slightly higher price. Often the binding of the American edition is more substantial, and again clients prefer to have this edition even if it costs a little more.

'Medical Bookseller'

Cape Town
28 October 1954

The Medical Association of South Africa
Die Mediese Vereniging van Suid-Afrika

AGENCY DEPARTMENT : AGENTSKAP-AFDELING

DURBAN

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(PD28) Durban. General practice, also non-European surgery. Owing to ill-health owner wishes to sell as soon as possible. Premium £1,750. House for sale £8,000.

(PD30) Durban. Old-established good class, mainly European practice. Premium £3,000. Owner intends specializing.

(PD31) Natal Inland. Unopposed prescribing practice, mainly Native. Monthly cash receipts average £450. Premium required £2,500 includes surgery, furniture and instruments. House for sale. All sporting facilities.

(PD32) Northern Natal. Well established general mixed practice of 20 years standing. M.O.H. and D.S. appointments. All hospital facilities. Premium £1,500 including surgery furniture and drugs. House £12 per month. For immediate sale.

Physician Specialist unopposed Practice for immediate sale. Inland City Premium £2,500 includes £1,000 equipment.

LOCUMS REQUIRED

(SV5) Locum for January. £3 3s. per day plus board and lodging. £10 car allowance and petrol. Natal Hospital town. Travelling allowance to and from practice for reasonable distance.

(LD6) Natal. From 8 to 23 January 1955. Mainly non-European dispensing with mine Hospital appointment. Own car necessary. £3 3s. per day, all found.

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(NC5) Assistant required in general practice, country practice. 75% non-European. No surgery or midwifery undertaken. Very little night work. Commence December 1954. Salary £1,200 p.a. ¾-hour drive from Durban.

* * *

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(1574) Cape Province, coastal town. Half share for sale in best class European practice owing to retirement of one partner. House with consulting rooms available.

(1759) Westelike Provinsie. Praktyk sonder opposisie. D.S. Aanstelling. Gemiddelde inkomste £3,078. Koopprys £1,500 vir klandisiewaarde, geneesmiddels, instrumente en ameublement. Moderne huis te koop of te huur teen £10 p.m. Betaling kan deur paaiemente geskied.

(1760) Cape Town Suburb. Average annual cash takings £3,442. Scope for surgery, premium £1,750. Payment on terms to be arranged.

(1776) W.P. Hospitaaldorp. Kans vir snykunde. Huis met spreekkamers te koop of te huur. Volle besonderhede op aanvraag.

(1771) Groot plattelandse hospitaaldorp. Eenmanspraktyk. Koopprys £1,000 vir klandisiewaarde, geneesmiddels, instrumente en apteekameublement. Gerieflike moderne huis te koop teen £4,500. Betaling kan in paaiemente geskied.

(1716) Cape Province. Town with Provincial hospital. Gross receipts, 1953/54, £6,900/£6,400. D.S. appointment. House for sale or to let. £3,000 required for goodwill. Payment ± £1,000 cash, balance over 3 years.

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Medical House, 5 Esselen Street. Telephones: 44-9134, 44-0817
Mediese Huis, Esselenstraat 5. Telefone: 44-9134, 44-0817
Tel. Add.: 'Serpent'

PRACTICES AND PARTNERSHIPS OFFERED
PRAKTYKE EN VENNOOTSKAPPE AANGEBIED

(Pr-S154) Transvaalse dorp, binne maklike bereik van Johannesburg. 'n Assistent met oog op vennootskap word verlang vir 'n goedgevestigde praktyk, wat steeds uitbrei. Goeie aanvangsalaris plus kommissie sal betaal word. Chirurgie word gedoen en iemand met kennis daarvan, sal voorkeur geniet.

(Pr-S153) 'n Vennootskap word aangebied in 'n groot Transvaalse dorp, met groot hospitaal. Hoewel hierdie praktyk oud-gevestig is, brei dit tans nog uit, en kan die eienaar nie al die werk behartig nie. Geen aanstellings word gehou. Alle chirurgie word gedoen en iemand, met nie minder dan ongeveer ses jaar ondervinding, word verkies. Vir iemand wat 'n verplasing na 'n groot dorp, met goeie hospitaal en groot skole, wil maak, is dit 'n goeie geleentheid.

(Pr-S148) Northern Rhodesia. An exceptionally well-organized, high class practice in a large hospital town. Actual cash takings £3,500/£4,000 p.a. Expenses are approximately £750 p.a. Will suit Doctor with surgery and/or gynaecology as background. Practically no country travelling is done. Premium: £1,500 for goodwill, introduction and equipment. Terms could be arranged. In case of an outright sale, an introduction of about 6 months will be given. This doctor also requires a locum to start as soon as possible, and if suitable as Assistantship/Partnership will be offered, with view to succession.

(Pr-S151) Transvaal. 'n Ongeopponeerde praktyk, met twee oordraagbare aanstellings. Die netto inkomste oorskry £2,500 per jaar. Die eienaar is reeds die afgelope 8 jaar in besit van hierdie praktyk. Die werk is nie veeleisend nie, en min nagwerk word gedoen. Huis te huur vir getroude persoon. Die premie is £1,000 en sluit medisyne voorraad en instrumente in. Beste terme denkbaar sal gereël word.

(Pr-S149) Pretoria. Goedgevestigde praktyk met oordraagbare aanstellings van £125 per maand. Privaat praktyk bring 'n verdere £175/£200 p.m. in en hierop kan nog verbeter word. Die premie s £2,000 en sluit meubels, instrumente en medisyne-voorraad in. Terme kan gereël word.

(Pr-S143) Transvaal. Een van die beste vennootskap-praktyke, word as 'n geheel te koop aangebied. Aanstellings aan die praktyk verbonde beloop ongeveer £3,500 per jaar. Die netto inkomste van die praktyk is £7,000 per jaar. Die premie is £3,000 en sluit alle medisyne en meubels in. Dit is van belang dat twee geneeshere hierdie praktyk saam koop, in welke geval elkeen £1,500 betaal. Terme kan gereël word. Volle besonderhede op aanvraag.

(Pr-S134) Transvaal. Partner is required with view to succession. Old-established dispensing, practice. Gross income over £4,000 p.a. House available to rent or to buy. Excellent opportunity for an Afrikaans speaking doctor to acquire a sound partnership/practice, with appointments. Small initial capital required.

(Pr-S125) Noord-Vrystaat. Groot hospitaaldorp, met goeie skole. 'n Goedgevestigde praktyk met 'n netto inkomste van oor £4,000 p.j. Praktyksonkoste aansienlik laag. Eienaar onderneem alle chirurgie. Een oordraagbare aanstelling van £26 p.m. Die premie is £2,500 en kan as volg afbetaal word: £1,000 kontant en balans teen £50 per maand. Dit sluit alle spreekkamertoerusting in.

(Pr-S136) Vrystaat. 'n Praktyk geskik vir twee jong geneeshere, wat saam wil praktiseer. 'n Ou-gevestigde praktyk met 'n aanstelling wat ongeveer £1,000 per jaar inbring. Die gemiddelde jaarlikse inkomste is £4,700/£4,900. Praktykonkoste is baie laag. Spreekkamers te huur teen £8 5s. 0d. per maand en 'n gerieflike woning teen £12 p.m. Eienaar doen geen snykunde nie, en alhoewel dit gedoen kan word, sal die praktyk 'n Internis, uitstekend pas. Premie is £2,000 en terme kan gereël word.

(Pr-S141) Johannesburg. Non-European practice, with two surgeries in excellent positions. No night work and no weekend work. Cash takings average £250 p.m. Expenses under £90 per month. This proposition will definitely suit someone wishing to expand or a beginner.

Transvaal Provincial Administration

VACANCIES : TRANSVAAL PUBLIC HOSPITALS

Applications are invited from suitably qualified candidates for the undermentioned posts at Public Hospitals in the Transvaal.

Applications should be addressed to the Medical Superintendents of the undermentioned Hospitals concerned and should contain full particulars as to the age, professional and academic and language qualifications, experience and conjugal status of the applicant and should further indicate the earliest date upon which duties can be assumed. Copies, only, of recent testimonials to be attached.

Cost of Living Allowance payable at present to full-time employees:

Salary	*Cost of Living Allowance* *Married*	*Single*
Over £350 p.a.	£352 p.a.	£110 p.a.

Full-time employees receive in addition to their salaries and cost of living allowance, the following privileges:

Leave and rail concession.

Successful candidates will be required to submit satisfactory certificates as also to submit to a medical examination at the hospital concerned.

Application forms are obtainable from any Transvaal Provincial Hospital or the Provincial Secretary, Hospital Services Branch, P.O. Box 2060, Pretoria.

The closing date of applications for undermentioned posts will be 1 December 1954.

Post	*Hospital*	*Salary*	*Qualifications and Remarks*
Medical Officer-in-Charge	Standerton	£1,000 × 50—1,200	Registered Medical Practitioner. Previous administrative experience a recommendation. Plus £180 per annum house allowance. Medical administrative responsibility of the hospital together with treatment of some of the patients.
Radiologist	Pretoria	£1,200 × 50—1,500	Registered Medical Practitioner with qualifications in Radiology.
Part-time General Practitioner	Zeerust (4)	£170 p.a. 1 session per week. Plus £100 p.a. for administrative duties by the Medical Officer to be appointed. Part-time Medical Superintendent	Registered Medical Practitioner.
Clinical Assistent	Vereeniging	£620—780—820—860	Registered Medical Practitioner. Must be qualified for at least two years.
Clinical Assistant (Anaesthetics)	Vereeniging	£620—780—820—860	do.
Clinical Assistant (Ophthalmology)	Pretoria	£620—780—820—860	do.
Medical Officer	Far East Rand, P.O. New State Areas	£620—780—820—860	Registered Medical Practitioner.
Casualty Officer	Boksburg-Benoni	£620—780—820—860	do.
	Far East Rand, P.O. New State Areas	do.	do.
	Pretoria	do.	do.
	Vereeniging	do.	do.
Senior Houseman	Edenvale, P.O. Raedene	£480 p.a. Plus board and quarters or an allowance of £120 p.a. in lieu thereof	do.
	Rustenburg	do.	do.
Senior Houseman (Ophthalmology)	Pretoria	do.	do.
Senior Houseman	Far East Rand, P.O. New State Areas	£480 p.a. Plus board and quarters or an allowance of £120 p.a. in lieu thereof	Registered Medical Practitioner.
	Vereeniging	do.	do.
	Wolmaransstad	do.	do.
Or			
Intern	Far East Rand, P.O. New State Areas	£240 p.a. Plus board and quarters or an allowance of £120 p.a. in lieu thereof	—
	Vereeniging	do.	—
	Wolmaransstad	do.	—

47818

De Beers Consolidated Mines, Limited

Applications are invited from Registered Practitioners for the following appointments:

Medical Officer to the Coloured employees of the Company.
Surgical Assistant.
Anaesthetist.

Applications stating qualifications, experience, etc., should be addressed to the General Manager, P.O. Box 616, Kimberley, from whom copies of contract may be obtained by *bona fide* applicants.

Duties to commence on 1 January 1955.

RADIOLOGICAL PRACTICE FOR SALE

Radiological practice for sale. Hospital town, growing industrial area. Northern diagnostic and therapeutic machines. Owner desirous of proceeding overseas. Reply A.W.V., P.O. Box 643, Cape Town.

IMPORTANT NOTICE

Medical practitioners who intend applying for any appointment specified in this notice for which an advertisement appears in this issue of the Journal are advised to communicate first with the Honorary Secretary of the Branch of the Medical Association of South Africa concerned:

Advertisement: **S.A. Iron & Steel Industries Corporation Ltd.**

Branch: **Griqualand West Branch, Board of Executors Buildings, Stockdale Street, Kimberley.**

City of Johannesburg

VACANCY

Applications are invited for the following vacant position in the City Health Department:

Medical Officer (Native Locations): Grade £1,146 12s.—£1,170 per annum plus locomotion allowance, plus a variable cost of living allowance, at present £15 12s. per month.

The successful applicant will be required to undergo a medical examination and become a member of the Council's Pension Fund.

Applicants must be medical practitioners, registered to practice in South Africa. Details of conditions of service will be supplied on application to the Medical Officer of Health, P.O. Box 1477, Johannesburg.

Personal canvassing for appointment in the gift of the Council is strictly prohibited. Proof thereof shall disqualify a candidate for appointment.

Applications in the candidates' own handwriting on special forms to be obtained from the Central Staff Office, Room 223, Municipal Offices, must be placed in the box in Room 223, Municipal Offices, or posted so as to reach the Town Clerk not later than 14 days after the appearance of this advertisement.

Brian Porter
Town Clerk
2672/1898

Suid-Afrikaanse Yster en Staal Industriële Korporasie, Beperk

VAKATURES VIR VOLTYDSE MEDIESE BEAMPTES IN DIE NOORDWESTELIKE GEBIED VAN DIE KAAPPROVINSIE

Aansoeke word ingewag van behoorlik gekwalifiseerde algemene mediese praktisyns vir die Korporasie en sy aanverwante maatskappye en organisasies in die Noordwestelike gebied van die Kaapprovinsie om diens te lewer aan blanke en nie-blanke werknemers sowel as aan lede en erkende afhanklikes van die Yskor-Mediese Bystandsfonds.

Daar is vakatures vir twee Mediese Beamptes, een met ondervinding in die chirurgie.

Van die Mediese Beamptes sal verlang word om hulle te vestig òf op Sishen òf op Lohathla in Noordwes-Kaapland, waar wonings beskikbaar is.

Aansoeke moet ondergetekende nie later as 12 November 1954 bereik nie.

Aansoekvorms tesame met volle besonderhede kan deur bona fide applikante op skriftelike aansoek van ondergetekende verkry word.

A. E. Hardenberg
Personeelbestuurder

Posbus 450
Pretoria
19 Oktober 1954

Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITAALDEPARTEMENT

HOSPITAALRAADSDIENS : VAKATURES

1. Aanseeke word ingewag van Geregistreerde Geneeshere vir aanstelling om die volgende vakante poste:

Afdeling	*Pos*	*Hospitaal*	*Emolumente*	*Sluitingsdatum*
Professionele en Tegniese	Geneesheer Graad A (ooggevalle-departement)	Frere-hospitaal, Oos-Londen	£500—600—660—720 per jaar	26 November 1954
	Geneesheer Graad B	Livingstone-hospitaal, Port Elizabeth	£720x40—960 per jaar	26 November 1954

2. Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragtens opgestel is.
3. Benewens die salarisskaal soos aangedui is 'n lewenskostetoelae betaalbaar aan voltydse beamptes en werknemers teen bedrae wat van tyd tot tyd deur die Administrateur vasgestel word.
4. Aansoeke moet aan die Mediese Superintendent van die betrokke hospitaal gerig word.
5. Die geslaagde kandidate, indien nie reeds in die Hospitaalraadsdiens nie, moet bevredigende geboorte- en gesondheidsertifikate indien.
6. Aansoeke moet gedoen word op die voorgeskrewe vorm (Staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.
7. Kandidate moet die vroegste datum meld waarop hulle diens kan aanvaar.

M129305

ASSISTENT / VENNOOT BENODIG

Algemene praktisyn in groot en baie vooruitstrewende plattelandse hospitaaldorp benodig, 'n medewerker wat ook belangstel in Snykunde. Inkomste baie groot. Alleenlik privaat praktyk word onderneem. Tweetalige Engelsprekende Christen ook welkom. Bel Pretoria 78-2928 (verkieslik tussen 6 en 10 n.m.) of skryf na 'Vennoot', Posbus 643, Kaapstad.

South African Iron and Steel Industrial Corporation Limited

VACANCIES FOR FULL-TIME MEDICAL OFFICERS IN THE NORTH WESTERN CAPE DISTRICT

Applications are invited from suitably qualified General Medical Practitioners for the Corporation and its Associated Companies and Organisations in the North Western Cape Area, to render services to European and non-European employees as well as to members and acknowledged dependants of the Iscor Medical Benefit Fund.

There are vacancies for two Medical Officers, one with experience in surgery.

The Medical Officers will be required to be resident at Sishen or Lohathla in the North West Cape, where residences are available.

Applications must reach the undersigned on or before 12 November 1954.

Application forms together with full particulars will be forwarded to bona fide applicants on written application to the undersigned.

A. E. Hardenberg
Personal Manager

P.O. Box 450
Pretoria
19 October 1954

Town Council of Benoni

NOTICE NO. 105 OF 1954

VACANCY : CLINICAL MEDICAL OFFICER

Applications are invited from registered European medical practitioners (male), not over 50 years of age, for the above post in the Public Health Department on the salary scale £900 × 50—1,150, plus variable cost of living allowance which at present is £22 10s. (married) and £11 5s. (single) per month. In addition a locomotion allowance at the rate of eight pence per mile is payable.

The successful applicant will be required to pass a medical examination and join the Council's Pension Fund. The main duties in connection with this post are the institutional and domiciliary attendance on non-European tuberculotics and the conduct of the Council's Clinics, and such other duties as the Council may from time to time determine.

Applications stating age, marital state, qualifications and experience, and accompanied by not more than three recent testimonials, must reach the undersigned not later than 27 November 1954.

Canvassing for appointment in the gift of the Council is prohibited and proof thereof will disqualify the candidate.

F. S. Taylor
Town Clerk

Municipal Offices
Benoni
27 October 1954

5135

Natalse Provinsiale Administrasie

VAKATURES : ADJUNK-ASSISTENTGENEESHERE TE ADDINGTONHOSPITAAL

Aansoeke om aanstelling in die betrekkings van Adjunk-assistentgeneesheer (Medisyne), Adjunk-assistentgeneesheer (Narkotisering) en Adjunk-assistentgeneesheer (Vrouesiektes en Verloskunde) word van geregistreerde mediese praktisyns ingewag.

Salaris is volgens die skaal £720—840 × 60—1,020.

Duurtetoeslag teen onderstaande tariewe is ook betaalbaar:

Getroudes (mans), £320 p.j.

Ongetroudes (mans of vroue), £100 p.j.

Aansoeke om die betrekking moet gemaak word op die voorgeskrewe vorm Z. 83, wat verkrygbaar is by enige Provinsiale of Goewermentskantoor, en moet tesame met volle besonderhede van vorige ondervinding, gerig word aan die Direkteur van Provinsiale Mediese en Gesondheidsdienste, Posbus 20, Pietermaritzburg, om hom voor of op 30 November 1954, te bereik.

AD8436

Natal Provincial Administration

VACANCIES : REGISTRARS AT ADDINGTON HOSPITAL

Applications are invited from Registered Medical Practitioners, for appointment to the posts of Registrar (Medicine), Registrar (Anaesthetics) and Registrar (Gynaecology and Obstetrics).

Salary is on the scale £720—840 × 60—1,020.

Cost of Living Allowance is also payable at the following rates:

Married (Male), £320 per annum.

Single (Male or Female), £100 per annum.

Applications for the post must be made on Form Z. 83 which is obtainable from any Provincial or Government Office, and must be forwarded with full particulars of previous experience, to the Director of Provincial Medical and Health Services, P.O. Box 20, Pietermaritzburg, to reach him by 30 November 1954.

AD8436

ASSISTANTSHIP REQUIRED

Assistantship required with view to purchase in Eastern Province. Apply A.W.U., P.O. Box 643, Cape Town.

TO ADVERTISERS

Johannesburg doctor with some literary ability would like to do part-time publicity copy writing for wholesale drug house. Write A.W.T., P.O. Box 643, Cape Town.

University of Cape Town

REFRESHER COURSE FOR GENERAL PRACTITIONERS 17 TO 21 JANUARY 1955

A Refresher Course for General Practitioners will be held from Monday 17 January to Friday 21 January 1955, inclusive.

The course will include lectures and demonstrations in medicine, surgery, obstetrics and Gynaecology, and the specialties. These will be held at appointed times between 8 a.m. and 5 p.m. daily and on the evening of Wednesday 19 January 1955. Further details of the course will be published within the next two weeks.

The fee for the course will be five guineas payable in advance to the Registrar, University of Cape Town.

The number of practitioners accepted for the course will be restricted.

Board and lodging will be available at the Medical Students residence for those desiring it (and for their wives) at a charge of one guinea per day.

Applications, stating whether residential accommodation will be required or not, must be submitted to the Registrar, University of Cape Town, Private Bag, Rondebosch, by 4 December 1954.

The Divisional Council of the Cape

VACANCIES FOR MEDICAL OFFICERS AT THE DR. A. J. STALS MEMORIAL SANATORIUM

Applications are invited from Registered Medical Practitioners (European male or female) for the under-mentioned vacancies at the Dr. A. J. Stals Memorial Sanatorium, Westlake, Retreat. (Non-European female and child Tuberculosis patients.)

A. *Senior Medical Officer.* (Two posts.)

At a salary on the commencing notch of the scale £1,318 × 50—£1,468 per annum plus temporary Cost of Living Allowance which at present is at the rate of £234 per annum on the married basis and £58 16s. 0d. per annum on the single basis. (Gross commencing emoluments £1,552 per annum on the married basis and £1,376 16s. 0d. on the single basis.)

B. *Junior Medical Officer.* (Two posts.)

At a salary on the commencing notch of the scale £1,018 × 50—£1,268 per annum plus temporary Cost of Living Allowance which at present is at the rate of £234 per annum on the married basis and £58 16s. 0d. per annum on the single basis. (Gross commencing emoluments £1,252 per annum on the married basis and £1,076 16s. 0d. on the single basis.)

All these appointments will be subject to the provisions of the Union Department of Health's Departmental Circular No. 10 of 1954—including the provisions regarding deductions for quarters, etc. if such are provided.

(*Note:* Quarters will only be available for the incumbent of one of the four posts advertised.)

Applications must contain full details of qualifications and previous experience, age, sex and marital state, and whether bilingual, and should clearly indicate the post for which application is made and the earliest date on which duty could be commenced. Copies of recent testimonials covering professional experience should be furnished.

The successful applicant will be required to serve a probationary period of six months and, on confirmation of appointment, to become a member of the Council's Pension Scheme and of the South African Association of Municipal Employees. Medical fitness is therefore a condition of appointment.

Any further information required may be obtained upon enquiry direct to the Medical Officer of Health of the Council.

Applications must be addressed in writing to the undersigned to reach the Council's offices not later than noon on the 27th November 1954.

Canvassing of Councillors or officials will prove a disqualification.

C. V. Emms
Secretary

6 Dorp Street
Cape Town
3 November 1954

2062

Iscor Medical Benefit Fund

PART-TIME SPECIALISTS

Applications are invited from suitably qualified Specialists resident and practising in Pretoria for the undermentioned part-time appointments:

(*a*) Three part-time Ophthalmologists.
(*b*) Two part-time Paediatricians.
(*c*) Two part-time Dermatologists.
(*d*) One part-time Therapeutic Radiologist.

Applications must reach the undersigned by not later than 27 November 1954. Full particulars will be forwarded to bona fide applicants.

Q. S. van Castricum
General Secretary

P.O. Box 450
Pretoria
21 October 1954

Yskor Mediese Bystandsfonds

DEELTYDSE SPESIALISTE

Aansoeke word ingewag van behoorlik gekwalifiseerde Spesialiste wat in Pretoria woon en praktiseer, vir die ondervermelde deeltydse aanstellings:

(*a*) Drie deeltydse Oogheelkundiges.
(*b*) Twee deeltydse Kinderspesialiste.
(*c*) Twee deeltydse Velspesialiste.
(*d*) Een deeltydse Therapeutiese Radioloog.

Aansoeke moet die ondergetekende nie later as 27 November 1954, bereik nie. Volle besonderhede sal aan bona fide applikante verstrek word.

Q. S. van Castricum
Algemene Sekretaris

Posbus 450
Pretoria
21 Oktober 1954

Sick Benefit Fund for the Diamond Cutting Industry of South Africa

(WITWATERSRAND AREA)

PART-TIME MEDICAL OFFICERS FOR JOHANNESBURG AND ROODEPOORT-MARAISBURG MUNICIPAL AREAS

Applications are invited from fully qualified registered General Practitioners in respect of the abovementioned appointments.

The Fund operates on the closed panel system and the successful candidate will be required to provide consulting room, domiciliary and hospital service (when necessary) for members and their dependants.

Further details will be furnished on request.

Applications to be submitted to the Secretary of the Fund, P.O. Box 8304, Johannesburg.

INSTRUMENTS FOR SALE

Full range of Instruments for country medical and surgical practice, including Reichert Microscope, complete set of Dental Forceps, Hygienstor and Steriliser. On view, 18 Lawrence Road, Westcliffe Extension, Johannesburg, 5 to 6 p.m. daily. Telephone 41-2787.

ASSISTENT BENODIG

Assistent dringend benodig in gevestigde plattelandse tweemanpraktyk met D.G. en S.A.S. aanstellings. Vooruitsig tot vennootskap indien geskik, binne kort tyd. Snykunde-ondervinding sal 'n aanbeveling wees. £3 3s. 0d. per dag plus reistoelae. Moet eie motor hê. Doen aansoek A.W.P., Posbus 643, Kaapstad.

CONSULTING ROOMS FOR DENTIST AVAILABLE

To share consulting rooms at Caversham Buildings, Main Road, Bergvliet. Apply A.W.X., P.O. Box 643, Cape Town.

Western Province Blood Transfusion Service

SOUTH AFRICA

MEDICAL DIRECTOR (PATHOLOGIST)

Applications are invited from Medical Practitioners (registered or registrable with the South African Medical and Dental Council) for the post of Medical Director to the Western Province Blood Transfusion Service at a salary of £2,500 per annum (inclusive).

The duties attaching to the post will consist of the expansion of the existing Blood Transfusion Service and the establishment of the necessary Laboratory services.

Applicants should have adequate experience in all branches of Blood Transfusion work with special reference to Laboratory work.

The appointment will, in the first instance, be for a trial period of one year, with a definite contract of five years thereafter; the terms of the contract being subject to review after that period. The Medical Director will, however, be entitled to give six months notice of termination of contract at any time after completion of the first year of the contract period.

Applications, together with full particulars, should be submitted to The Secretary, Western Province Blood Transfusion Service, P.O. Box 3788, Cape Town, to reach him not later than 31 December 1954.

Westelike Provinsie-Bloedoortappings-Diens

SUID-AFRIKA

GENEESHEER-DIREKTEUR (PATOLOOG)

Aansoeke word ingewag van geneeshere (geregistreer of registreerbaar by die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad) om die betrekking van Geneesheer-Direkteur van die Westelike Provinsie-bloedoortappingsdiens teen 'n salaris van £2,500 per jaar (inklusief).

Die pligte aan die pos verbonde behels uitbreiding van die bestaande bloedoortappingsdiens en die oprigting van die nodige laboratoriumdienste.

Applikante moet oor voldoende ondervinding van alle vertakkinge van bloedoortappingswerk beskik veral met betrekking tot laboratoriumwerk.

Die aanstelling sal in die eerste instansie vir 'n proeftydperk van een jaar wees, daarna onder 'n vaste kontrak vir vyf jaar, na welke tydperk die terme van die kontrak hersien sal word. Die Geneesheer-Direkteur sal egter geregtig wees om ter enige tyd na verstryking van die eerste jaar van die kontrak ses maande kennis van beëindiging van die kontrak te gee.

Aansoeke, vergesel van volle besonderhede, moet by die Sekretaris, Westelike Provinsie-bloedoortappingsdiens, Posbus 3788, Kaapstad ingedien word en hom nie later as 31 Desember 1954 bereik nie.

APPLICATIONS ARE INVITED FROM MEDICAL PRACTITIONERS

Prepared to give part-time service for the purpose of drawing blood from donors, administering blood transfusions and medically examining donors. Full details will be supplied on application—Write: The Medical Officer, Western Province Blood Transfusion Service, P.O. Box 3788, Cape Town.

TE KOOP—FOR SALE

Draagbare X-straal-masjien, sluit in fluoroskoop, 2×2-gellingtenks (eboniet), 1 Cassette, 12 films, timor ens. Skrywe aan A.W.R., Posbus 643, Kaapstad.

Portable X-ray Machine, includes fluoroscope 2×2 gallon tanks, 1 Cassette, 12 films, timor, etc. Write to A.W.R., P.O. Box 643, Cape Town.

Printed by National Commercial Printers, Elsies River, and Published by the Proprietors, *The Medical Association of South Africa*, Medical House, 35 Wale Street, Cape Town. P.O. Box 643. Telephone 2-6177. Telegrams: 'Medical'.